

**BIRDS OF THE CYPRESS HILLS
AND
FLOTTEN LAKE REGIONS,
SASKATCHEWAN**

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BIRDS OF THE CYPRESS HILLS AND
FLOTTEN LAKE REGIONS,
SASKATCHEWAN

BY
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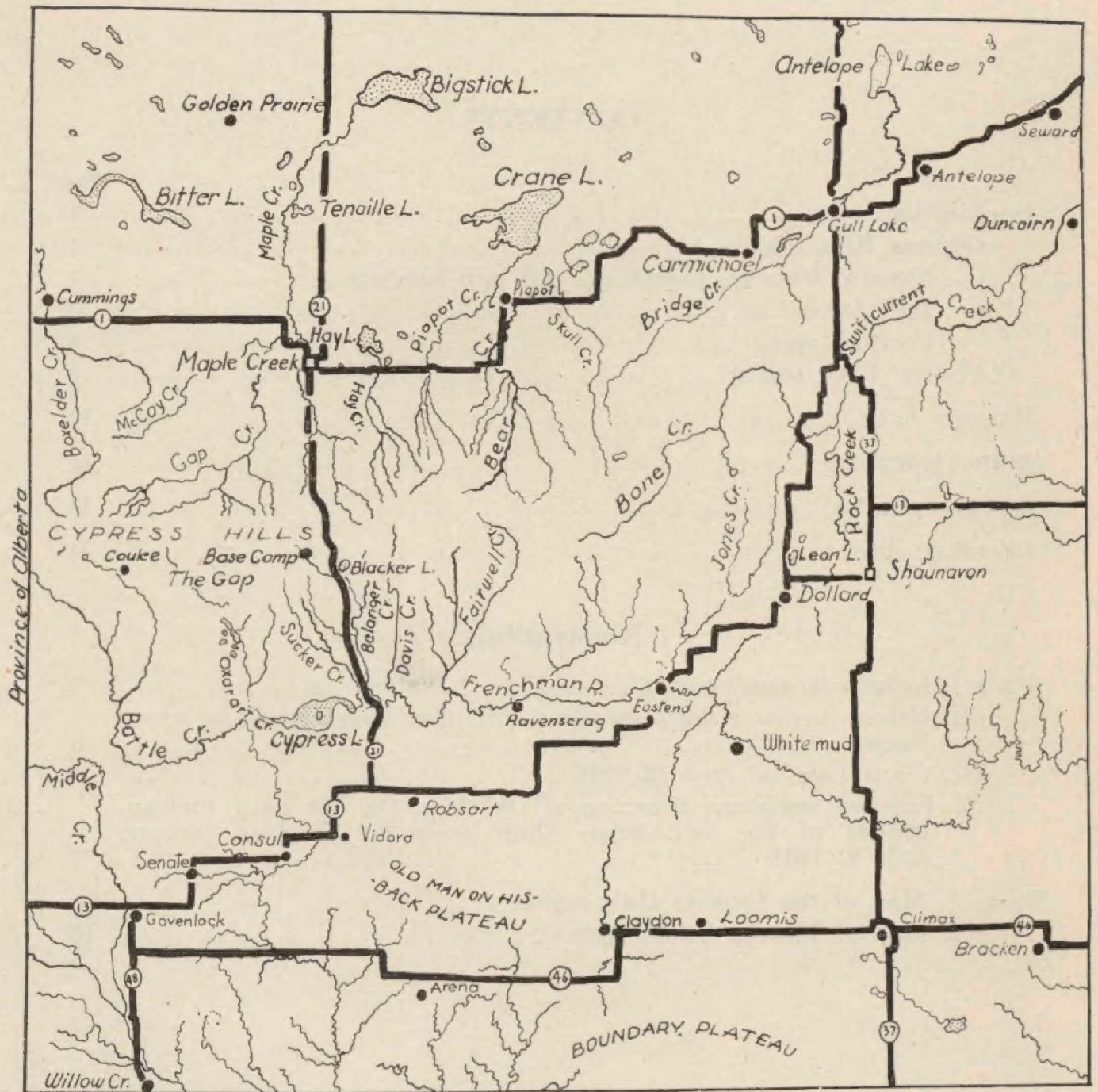


FIGURE 1. Map of the Cypress Hills region.

BIRDS OF THE CYPRESS HILLS AND FLOTTEN LAKE REGIONS, SASKATCHEWAN

INTRODUCTION

CYPRESS HILLS REGION

For present purposes the Cypress Hills region is defined as that part of Saskatchewan between longitudes 108 and 110 degrees west and latitudes 49 degrees and 50°20' north. It lies immediately north of the International Boundary and east of the Alberta boundary.

Physical Features, Vegetation, and Bird Habitats. The flat-topped, much-dissected Cypress Hills plateau is the most prominent physical feature of the region. Trending east-west, its length is approximately 100 miles, about 35 miles of which extend west into Alberta. In breadth, it varies between perhaps 15 and 20 miles at the base. Although highest at its west end in Alberta, in Saskatchewan altitudes of at least 4,500 feet above sea-level are reached in the western part, contrasting with 2,507 feet at Maple Creek and 2,326 at Bigstick Lake on the plains below. This plateau is a part of the Continental Divide with streams from its south side contributing to the Missouri drainage system and those from the north slopes flowing toward South Saskatchewan River. However, most of the north-flowing streams are local, feeding non-permanent alkaline lakes on the plains.

The higher parts of the Cypress Hills are in marked contrast to the semi-arid, rolling, treeless plains characteristic of most of the region. Particularly on the higher west end and the upper north slopes of the plateau, good stands of coniferous forest occur. Aspen forest is extensive at higher to middle altitudes, and tongues of woodland and shrubbery follow the numerous streams and coulée bottoms down to, and often well onto, the plains. Of particular interest to the zoölogist is the relatively cool coniferous forest of the high plateau, which is surrounded by semi-arid plains and thus is isolated from similar habitat in the Rocky Mountains and their outliers in Montana.

The highest parts of Cypress Hills plateau appear to be unglaciated, but that any resulting refugium was of small extent is indicated by the presence of moraines in the broad but not deep valley, known locally as The Gap, which crosses the plateau at the west end of the centre block of hills. For a recent account of the geology of the region the reader is referred to Furnival (1946).

Coniferous forest consists of lodgepole pine (*Pinus contorta*) and white spruce (*Picea glauca*). It is confined to higher altitudes on the Cypress Hills plateau. Although white spruce is probably the climax forest, it is now, owing to forest fires and timber cutting in the past, much less extensive than is lodgepole pine.

Lodgepole pine forest as represented in the Cypress Hills Provincial Park is of various ages, due to fires and cutting. The writer was informed that in 1885 much of the forest in that area was destroyed by fire. Today

forests of this conifer are from 30 to 50 feet in height there. The understory is relatively light and easy to travel through, although the straight, slender trees permit considerable penetration of sunlight. Willow (*Salix*) in individuals or isolated clumps grows commonly under this lodgepole pine forest. Twin-flower (*Linnaea borealis*) and bunchberry (*Cornus canadensis*) carpet the ground and bearberry (*Arctostaphylos uva-ursi*) is common. Where the canopy is very sparse, in forest openings or forest edge, purple virgin's bower (*Clematis columbiana*), cream-coloured vetchling (*Lathyrus ochroleucus*), Canadian anemone (*Anemone canadensis*), cranesbill (*Geranium richardsonii*), low-bush cranberry (*Viburnum edule*), cow parsnip (*Heracleum lanatum*), and low buffalo berry (*Shepherdia canadensis*) are not uncommon.

PLATE I



Lodgepole pine forest, Cypress Hills, Saskatchewan. June 18, 1948.
(Negative No. 6-2, 1948)

Numerically, birds are not very common in this forest, but species inhabiting it include the arctic three-toed woodpecker, red-breasted nuthatch, Audubon warbler, pine siskin, red crossbill, pink-sided junco, western robin, eastern sharp-shinned hawk, Arctic horned owl, northern hairy woodpecker, western crow, long-tailed chickadee, cedar waxwing, and western chipping sparrow.

Considerable areas of very immature lodgepole pine reaching heights of 20 to 25 feet and with trunk diameters averaging 6 inches cover more recent burns. These young trees are so densely crowded that almost no other plants grow under them. There is a very sparse bird population, made up mainly of the western robin, Audubon warbler, and pink-sided junco.

White spruce was not found in any extensive stands, but it was the dominant tree in the ravines at higher altitudes. Thus, it is difficult to compare this habitat with the vastly more extensive lodgepole pine forest.

However, almost all the birds occurring in the latter were present also in white spruce. It might be significant to note that of the four bird nests located in coniferous trees (western robin, 1; cedar waxwing, 1; and western chipping sparrow, 2) all were in white spruce rather than in the numerically superior lodgepole pine.

Aspen (*Populus tremuloides*) in almost pure stands covers very large areas at higher altitudes in the Cypress Hills. In sometimes extensive, otherwise treeless areas at highest altitudes, exposed to sun and wind, 'islands' of pure dense aspen of varying, but usually small, extent are numerous. The individual trees are squat and stunted and are so densely crowded that little sunlight gets through the canopy formed by their tops and there is little understory. The Rocky Mountain orange-crowned warbler is common in this habitat, and the Wright flycatcher and western robin are regular but much less common, as also is the pink-sided junco.

PLATE II



Balsam poplar reaches excellent individual development in upper Fairwell Creek.
July 13, 1948.

(Negative No. 10-4, 1948)

Aspen occupies also a usually broad belt that in width extends from the coniferous forest down to middle and lower altitudes where, often associated with hawthorn (*Crataegus*), it gives way abruptly to grassland. The individual trees of this aspen belt are of good stature, particularly on the north slopes. Birds commonly using this habitat are grey ruffed grouse (introduced), Wright flycatcher, red-eyed vireo, Rocky Mountain orange-crowned warbler, and oven-bird.

Balsam poplar (*Populus balsamifera*), box elder (*Acer negundo*), and cottonwood (*Populus* sp.), are conspicuous trees of the coulées and the floodplains of streams, particularly at middle and lower altitudes where they rise usually well above a more or less dense tangle of tall shrubbery. Excellent individual development of balsam poplar was noted in the coulée of

upper Fairwell Creek where this tree sometimes reaches a height of 65 feet. The great blue heron, Swainson's hawk, Arctic horned owl, eastern sparrow hawk, western house wren, northern hairy woodpecker, and hybrid flicker use these trees for nesting, and a number of other species forage in their branches.

Tall shrubbery is often dense and is locally quite extensive. Willows (*Salix*) are the commonest components of the tall shrubbery, but more or less common also and frequently associated with willows on drier ground are Saskatoon (*Amelanchier alnifolia*), pin-cherry (*Prunus pennsylvanica*), choke-cherry (*Prunus virginiana*), hawthorn (*Crataegus*), red osier dogwood (*Cornus stolonifera*), buck-thorn (*Rhamnus*), and thorny buffalo-berry (*Shepherdia argentea*).

Willow shrubbery covers the bottoms of low wet depressions in the Cypress Hills. The margins of streams at high altitudes and their flood-plains farther down support dense tangles of tall mixed shrubbery, which covers much of the coulée bottoms and thus often extends in narrow tongues out onto the plains. Scattered individuals or small groups of box elder and balsam poplar rise conspicuously above this shrubbery, and rosebush patches, often extensive, flank it at the outer edges.

Birds of the tall shrubbery are Wright and least flycatchers, American magpie, western catbird, western brown thrasher, western robin, willow thrush, white-rumped shrike, eastern yellow warbler, northern Macgillivray warbler, long-tailed chat, Brewer blackbird, Arctic towhee, Oregon white-crowned sparrow, and Dakota song sparrow. House wrens, using the large trees for nesting, forage abundantly in the tall shrubbery. The Wright flycatcher, northern Macgillivray warbler, and Oregon white-crowned sparrow prefer the tall shrubbery of the higher altitudes, but the other species are more abundant in this habitat at middle and lower altitudes.

Large areas on top of the plateau are treeless. Shrubby cinquefoil (*Potentilla fruticosa*) replaces as a dominant the sagebrush (*Artemisia*) of the treeless plains below, but imparts a similar aspect. Grasses and sedges are important cover. Other conspicuous plants in June are larkspur (*Delphinium bicolor*), golden bean (*Thermopsis rhombifolia*), ragwort (*Senecio*), dandelion (*Taraxacum*), blue-eyed grass (*Sisyrinchium*), buttercup (*Ranunculus*), Indian paint brush (*Castilleja rhixifolia*), and field mouse-ear (*Cerastium arvense*). Common birds of the treeless areas on the high plateau are Nevada savannah sparrow, western vesper sparrow, sharp-tailed grouse (near aspen or willow edges), upland plover, Sprague pipit, and western meadowlark. Conspicuously scarce (although occurring rarely) compared with their abundant numbers in grassland on the plains below are horned larks, longspurs, and the lark bunting.

The only woodland lakes observed were the small artificial ones, Loch Lomond and Loch Levin, in Cypress Hills Provincial Park. They differ from the plains lakes in being bordered by coniferous trees and tall shrubbery and in being of 'sweet' water. The belted kingfisher fished these lakes; a baldpate nested in nearby forest and visited them to feed and preen. A few mallards, great blue herons, California and ring-billed gulls, and black terns were irregular visitors. The spotted sandpiper was regularly observed and probably bred on the shores. Bird populations were much smaller than on any lake of comparable size visited on the plains.

Streams in the high plateau are mostly small, often with dense shrubbery at their margins. Beaver (*Castor*) dams are frequent and the thus impounded water and its emergent and aquatic vegetation attracts a few anatinine waterfowl, mostly mallards, some of which may breed nearby. Leopard frogs (*Rana pipiens*) are common. The eastern belted kingfisher uncommonly visits the upper parts of these streams; perhaps breeds in the abundant potential nesting sites present along the streams at lower altitudes. The American bittern finds food and cover on the margins of the streams and the great blue heron often feeds at the beaver dams. Some spotted sandpipers breed there and many other species visit the streams for drinking, bathing, and for the insects the water attracts.

The vast, rolling, semi-arid, treeless, short-grass plains occupy by far the greatest part of the region. The grass cover is usually sparse and short, particularly on certain especially saline, sun-baked areas and on the tops of the low, rolling, treeless hills. In the depressions grass cover is greener, denser, and taller Sagebrush (*Artemisia*), except locally, is conspicuous and well distributed, but over large areas south of the hills it grows best along the upper slopes of depressions. Greasewood (*Scorbutus*) reaches its best development and extent for the region south of the Cypress Hills. Other xerophytic plants such as the prickly pear cactus (*Opuntia polyacantha*) and purple-flowered cactus (*Mamillaria vivipara*) are common.

Characteristic birds of the short-grass plains are the desert horned lark, and the chestnut-collared and McCown longspurs. Where the grass is somewhat denser or where low shrubs provide cover, the lark bunting, western vesper sparrow, Nevada savannah sparrow, and western meadowlark are found. Locally adequate precipitation, as at the north base of Cypress Hills, permits excellent development of tall grasses, thus filling the habitat requirements of the bobolink.

Patches of low shrubs such as rose (*Rosa*), snowberry (*Symphoricarpos*) and silverberry (*Elaeagnus*) serve as nesting cover for many waterfowl. Where these are in the vicinity of water the northern plains yellow-throat is usually common. Such low shrubbery on the plains is favoured also by the clay-coloured sparrow and the Brewer sparrow. Sagebrush (*Artemisia*) also is favoured by the latter, and for the sage hen it provides both food and cover (although the latter bird is not known to inhabit the sagebrush north of Cypress Hills).

The lakes and sloughs of the short-grass plains when precipitation is adequate provide excellent breeding grounds for waterfowl. The plains lakes cannot be individually described here, but many of them have a number of features in common. Most are alkaline and non-permanent, being fed precariously by streams that originate in the Cypress Hills; their water levels, aside from those of dammed lakes, are determined largely by the caprices of precipitation. Ordinarily there is no woodland about their margins, and shrubbery such as willow, buckthorn, silverberry, rose, or snowberry is locally distributed. There is more or less emergent vegetation of such genera as *Scirpus*, *Typha*, and *Sagittaria*, and such aquatics as *Potamogeton* and *Myriophyllum*. Thus, cover and food requirements of the many breeding species of waterfowl are available.

Crane and Bigstick Lakes, on the plains north of Cypress Hills, were of considerable extent before the drought of the 1930s. Vast populations of waterfowl, shorebirds, gulls, and terns were found breeding there in 1905 and 1906 by Bent (1907), who described these lakes as ornithologically the "crowning glory of the whole region". Both these lakes dried up during the drought of the 1930s and have ceased to be the ornithological wonders they once were. As far back as 1922 Hoyes Lloyd recorded, on October 7 (MS.), with reference to Bigstick Lake that "the dam 18 miles north of Maple Creek on the creek itself is diverting water westward and keeping it from the lake. The wild geese come to water at a spring on S.12 showing that the waters of the lake are too strong for them. Cattle will not drink the water now unless sorely pressed . . . The old hunters' trail to the lake has returned to grassy prairie and their lodge has been sold since the lake began to recede and the suckers that once ran the creek in spring have disappeared".

PLATE III



Crane Lake on June 15, 1948.

(Negative No. 4-4, 1948)

On June 15, 1948, in spite of the unusually favourable water conditions that prevailed generally over the prairies that spring, we found most of the bed of what formerly was Crane Lake quite dry, shallow alkaline water covering an area perhaps 600 yards long and 200 yards in breadth. It seemed probable that this shallow water would disappear before mid-summer. Fifty-eight ducks of six species were observed, and on the margins of the shallow water, where a sparse *Juncus-Scirpus* vegetation existed, shorebirds counted were: 14 American avocets, 12 Wilson phalaropes, 5 marbled godwits, 4 western willets, and 3 belted piping plovers. Large areas of the lake bed were barren of vegetation or had sparse grass cover, and there desert horned larks were numerous, apparently breeding. A few Baird sparrows were found in the grassiest parts of the old lake bed.

Bigstick Lake, although dammed, also was only a small fraction of its former size when visited on June 7, 1948. However, approximately 850 ducks of ten species were counted and excellent numbers of marbled godwits were noted.

Cypress Lake, perhaps 8 miles long, near the headwaters of Frenchman River at the south base of the Cypress Hills, now an important P.F.R.A. irrigation project, is the largest lake in the region. This and the irrigation reservoirs at Piapot, Eastend, Maple Creek, and Tenaille Lake, as well as the numerous sloughs, are important breeding areas for grebes, ducks, Basin Canada goose, gulls, terns, shorebirds, giant red-wing, and yellow-headed blackbird.

PLATE IV



Exposed sandstone near top of Old Man On His Back Plateau, habitat of the rock wren. Dark areas are creeping juniper. July 8, 1948.

(Negative No. 10-1, 1948)

Rocky habitats are not extensive in the region. Considerable rock outcropping occurs on the south slopes of the Cypress Hills, but almost none was noted on the north slopes. On the west end and south side of the higher parts of Old Man On His Back Plateau, south of Cypress Hills, there is considerable outcropping with creeping juniper (*Juniperus horizontalis*) a conspicuous cover on the exposed sandstone, a habitat favoured by the rock wren. The prairie falcon, ferruginous rough-legged hawk, and Say phoebe use the rocky ledges of the badlands for nesting in the Eastend area.

Many banks suitable for the nesting requirements of the belted kingfisher and the bank swallow have been carved by the rivers and streams of the plains, but in the conglomerates of the higher parts of the Cypress Hills such habitat is naturally scarcer.

Man has considerably modified bird habitats in the region, although settlement still is sparse. In the wooded parts of the Cypress Hills he has

cut down trees; on the plains he has added them. The brushy clearings about dwellings in the wooded hills have larger small-bird populations than the unbroken forests that surround them. Plantations on the plains about ranch houses are oases that permit such species as the Arkansas kingbird, eastern yellow warbler, hybrid flicker, western robin, western house wren, mountain bluebird, and American magpie to nest in these otherwise treeless areas. Agricultural ploughing renders the land unsuitable for certain species, but the resulting grain crops attract a host of others. Irrigation reservoirs and ditches profoundly affect the distribution of water and marsh birds. Buildings may attract barn swallows, house sparrows, European starlings, even the Arctic horned owl, and bridges and culverts furnish nesting places for the Say phoebe and cliff swallow.

The Bird Fauna. The altitudinal variations in the region and the consequent local variations in climate account for a variety of ecological communities and a consequent variety in the bird influents of these communities.

Birds found in the apparently-unglaciaded plains-isolated higher parts of the Cypress Hills are of particular interest. The affinities of such species as Wright flycatcher, Rocky Mountain orange-crowned warbler, Oregon white-crowned sparrow, red crossbill, Audubon warbler, and pink-sided junco are with the Rocky Mountains to the west and their outliers to the south and southwest. The ruffed grouse is not known ever to have occurred naturally, but recently has successfully been introduced. Canada jays, spruce grouse, Hudsonian chickadees, and red squirrels, so common in the coniferous forests of central and northern Saskatchewan, are not known to occur.

Previous Work. In 1894, from June 8 to 30, John Macoun (1896) and William Spreadborough studied birds at Crane Lake, taking a few specimens, which are now in the National Museum of Canada. In this period some work was done also along Swifcurrent Creek in the eastern Cypress Hills. Again in 1895, Macoun (1897), travelling by horse and wagon, arrived at Cypress Lake on June 29 and camped for a few days at the mouth of Sucker Creek. The important ornithological results of these trips are published in Macoun's "Catalogue of Canadian Birds" (1900-04).

In 1906, A. C. Bent (1907 and 1908), with Rev. Herbert K. Job and Chester S. Day, spent late May and much of June on the plains north of Cypress Hills. Bent returned to Maple Creek on June 5, 1907, accompanied by Louis B. Bishop. Later Jonathan Dwight, Jr., joined the party. These eminent ornithologists covered well the plains, marshes, and lower creeks north of Cypress Hills. Bishop visited briefly the coniferous woods on the plateau. Good collections of specimens were made.

In 1908, Frank M. Chapman (1908) and Louis A. Fuertes spent the last 3 weeks of June at Crane Lake and Bigstick Lake. Chapman collected material for a habitat group of western grebes for the American Museum of Natural History.

H. H. Mitchell (1919, 1923, and 1924) of the Saskatchewan Provincial Museum conducted very productive field studies both on the wooded plateau and on the plains to the south in the spring of 1919 and 1921. He added several species to the Saskatchewan list.

Fred G. Bard, Director of the Saskatchewan Provincial Museum, collected birds in Cypress Hills Provincial Park, at Ravenscrag, and at Eastend, from late May to mid-June 1934. He kindly furnished the writer with a list of specimens taken, which has been useful in the present connection.

P. A. Taverner and Hoyes Lloyd, between August 8 and 11, 1920, visited briefly Bittern, Bigstick, Crane, and Gull Lakes. Taverner made a few notes and took several specimens that have been used in the preparation of the present report.

In 1921, P. A. Taverner and Hamilton M. Laing investigated for the National Museum of Canada the birds in the Cypress Lake and Eastend areas. Their field notes, mostly unpublished, and specimens have been used freely in the preparation of the present report.

Hoyes Lloyd, assisted by Herman Battersby, made observations and collected specimens in the Cypress Hills region in the period October 5 to 10, 1922. The specimens are in Mr. Lloyd's private collection.

In 1926, C. H. Young, of the National Museum of Canada, collected a small number of birds in addition to his main studies of the mammals in the Cypress Hills, near Maple Creek. His bird notes are fragmentary, but have been useful in furnishing supplementary information.

J. Dewey Soper, Dominion Wildlife Officer, has frequently visited the region in the course of his duties. He has substantially contributed to the ornithology of the region in several published articles.

Lawrence B. Potter resided for 40 years previous to his death on November 5, 1943, on his stock ranch near Eastend. He was a discerning observer who witnessed and recorded many changes in local bird populations in the long period covered by his observations. Other resident naturalists such as Charles F. Holmes, Spencer Pearse, and S. A. Mann have made important contributions to the ornithology of the region.

The birds of the Alberta side of the Cypress Hills were studied in 1945 by A. L. Rand and Howard Clemens in the period June 29 to July 13. The results of this work were published by Rand (1948).

M. Y. Williams (1946) made observations on the birds of the region subsidiary to his geological investigations in the summers of 1923 to 1926 inclusive.

Farley M. Mowat spent the period August 21 to September 21, 1939, in the Cypress Hills region. The results of his studies have not been published.

FLOTTEN LAKE REGION

Flotten Lake, in central western Saskatchewan, is situated at, approximately, latitude $54^{\circ} 37'$ north, longitude $108^{\circ} 29'$ west. This area lies within the mixedwood section of the Boreal Forest Region as defined by Halliday (1937). Topographically, the land is gently undulating to hilly, the hills being low and generally round topped. Lakes and streams of various sizes are numerous. The forest is one of transition from aspen grove farther south to coniferous forest farther north. The ecotonal nature of this is further complicated by its uneven age, due to numerous forest fires. Aspen, white birch, white spruce, balsam poplar, and balsam fir are characteristically mixed in varying proportions.

In this extensive mixedwood forest, the understory is usually light, with willow and alder in wet places and occasional, relatively sparse stands of ericaceous plants. Low-bush cranberry (*Viburnum edule*) is common

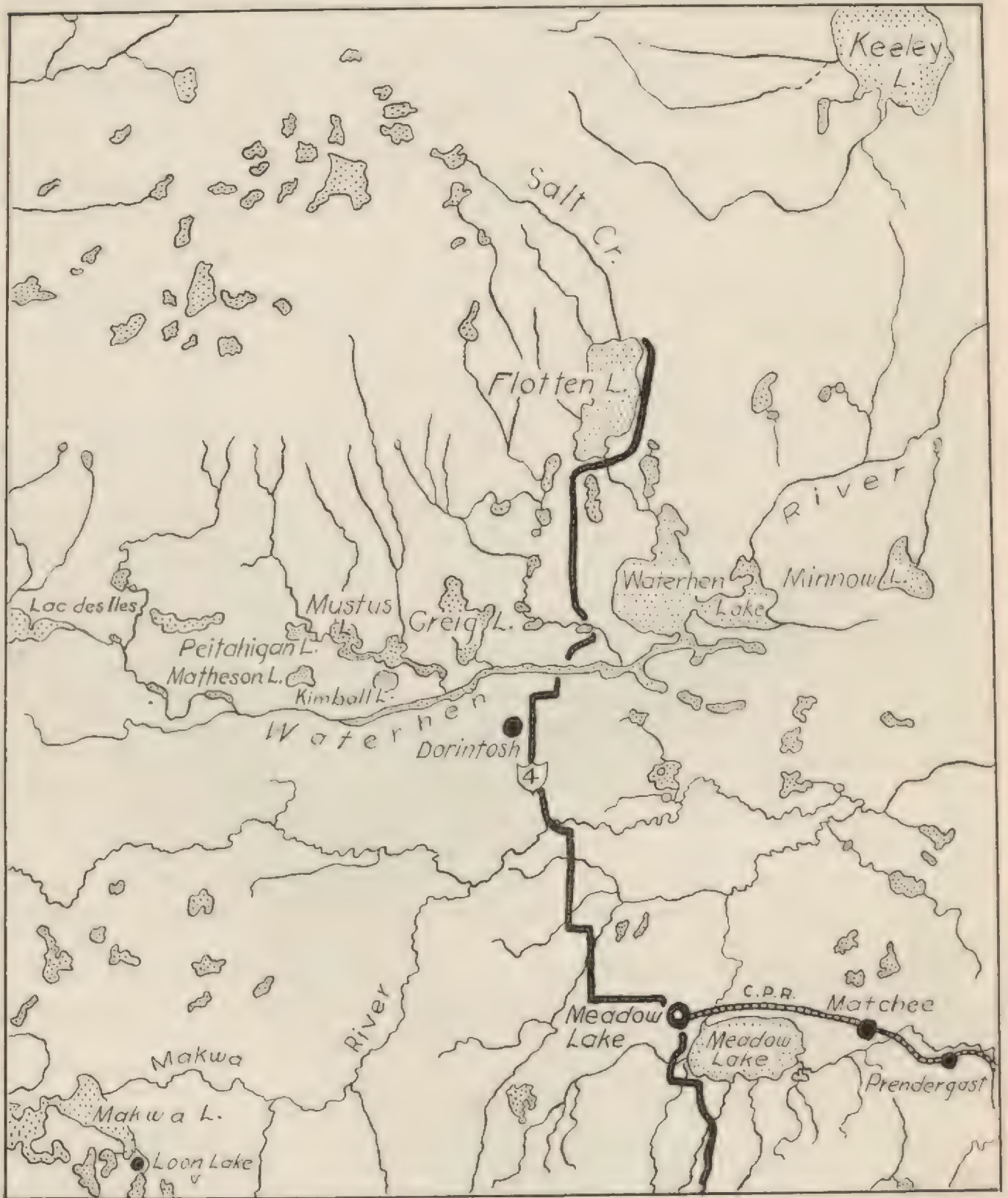


FIGURE 2. Map of Flotten Lake region.

in openings and sparse woodland. Wild sarsaparilla (*Aralia nudicaulis*) and bunch berry (*Cornus canadensis*) are conspicuous where the forest floor is not too dry. Dry-ground cranberry (*Vaccinium vitis-Idaea*) is abundant. Mosses occur in patches of varying extent. Birds and mammals are present in good numbers in this habitat type. Common bird species

are: spruce and ruffed grouse, great horned owl, ruby-throated hummingbird (nests), hairy and downy woodpeckers, Canada jay, blue jay, long-tailed and brown-headed chickadees, robin, hermit and olive-backed thrushes, cedar waxwing, western pewee, broad-winged hawk, flicker, myrtle warbler, redstart, slate-coloured junco, and white-throated sparrow.

Aspen-birch, mostly aspen, with balsam poplar, willow, and alder in depressions, covers large areas wherein conifers are few. Local patches and individuals of *Prunus* and *Amelanchier* are present. Where growth is sparse or in openings, blueberry (*Vaccinium*) and raspberry (*Rubus*) are more or less common. The bird fauna is less varied than in mixedwood forest, but the following species are found: robin, red-eyed vireo, rose-breasted grosbeak, chipping sparrow, and white-throated sparrow.

White spruce forest is not extensive in pure stands, although this tree is an important component of the mixedwood forests. A few isolated pure stands of white spruce were examined, however, which contained trees that were 80 feet or more in height. The white-winged crossbill, pine siskin, and brown-headed chickadee are common in this habitat. The bay-breasted warbler and brown creeper, uncommon birds in the region, were observed only in white spruce forest.

Jack pine forest in almost pure stands covers numerous extensive sandy areas and is of various ages as a result of several forest fires. Undercover is usually very sparse, and broad glades covered with the lichen *Cladonia* are characteristic. Best individual development of jack pine was observed about the south end of Jeanette Lake where this forest generally is of excellent stature. Birds inhabiting this forest type are: Arctic and American three-toed woodpeckers, Canada jay, brown-headed chickadee, robin, myrtle warbler, pine siskin, white-winged crossbill, slate-coloured junco, and white-throated sparrow.

Alder-willow tangles occur at the edges of many lakes and ponds, river and stream margins, bog and meadow edges, and on moist depressions in the forests. Sometimes mixed with them are red-osier dogwood (*Cornus stolonifera*). Such habitat attracts the alder and least flycatcher, catbird, yellow and palm warblers, Grinnell water-thrush, and Lincoln, song, swamp, and white-throated sparrows. In migration it attracts a host of other species.

Grass and sedge meadows are common, but are usually not of great extent. The marsh hawk hunts these, and the Savannah and Leconte sparrows breed in them. When rosebushes and other low shrubbery are present, this often attracts the yellow-throat.

Marshes, the term here applied to those parts of swamps where trees and tall shrubbery are absent or nearly so, occur at the edges of numerous lakes and ponds and along such sluggish streams as Waterhen and Meadow Rivers and Otter Creek.

Woodland ponds are numerous, usually shallow, and many support stands of *Juncus*, *Scirpus*, *Carex*, *Equisetum*, and grasses at their margins. Farther back, ground birch is sometimes important and willow-alder zones are generally well developed. Ducks, particularly blue-winged teal and mallard, frequent many of these small ponds, as do also the sora rail, Leconte sparrow, and solitary sandpiper.

Flotten, Waterhen, Craig, Mustus, Kimball, Matheson, Peitahigan, and Meadow Lakes are the largest of the many lakes in the area investigated.

Flotten Lake is about 6 miles long with a maximum breadth of somewhat more than 2 miles. Its north end is approximately 37 airline miles north of railhead at Meadow Lake. It is generally rather shallow, is almost completely encircled by a narrow, gently sloping sand beach that varies between 2 and 30 feet in width. Low sandy banks, 1 to 10 feet high, easily eroded by high water, abruptly divide the upper beach from the mixedwood forest, which reaches to the edge of these banks. There are three islands in this lake. The largest, locally called Big Island, has an area of perhaps 15 acres and a height of about 85 feet, and is well forested with mainly conifers. Little Island also is well wooded and has an area of about 5 acres. Gull Island, little more than a low 2-acre rock pile, supports mainly tangles of gooseberry and raspberry, among which the common tern and white-winged scoter nested. California and ring-billed gulls and white pelicans regularly rested on the shores of this small island and the spotted sandpiper fed there.

Although the shores of Flotten Lake are mostly sand beach, almost barren of living vegetation, stands of bulrush (*Scirpus*) occur in a few places. Some are quite large, extending 100 yards or more out in the shallow water. Cat-tail (*Typha*) occurs in the few protected bays. This emergent vegetation provides cover for the nesting requirements of Holboell and western grebes, ducks, sora rails, black terns, and common loons; such aquatics as pondweeds (*Potamogeton*) and water milfoil (*Myriophyllum*) are abundant in this lake.

Between Dorintosh and Meadow Lake there are many farms. The clearings, buildings, and crops attract a number of species that were not observed in the unsettled country north of Dorintosh, e.g., English sparrow, white-rumped shrike, mourning dove, purple martin, western meadowlark, willow thrush, Brewer blackbird, and pale goldfinch. Additional field-loving species were much commoner in the settled country.

ITINERARY

During the summer of 1948, a field party of the National Museum of Canada, composed of Messrs. S. D. MacDonald, Rodger O. Standfield, B. C. W. Hummel (until July 29), and the writer investigated the bird and mammal faunas of southwestern and central western Saskatchewan. In the period June 4 to July 14 camp was maintained in Cypress Hills Provincial Park. Although emphasis was placed on the wooded areas of the Cypress Hills plateau, work was done also on the plains north to Bigstick and Crane Lakes and south to the International Boundary. Base camp was then moved north to Flotten Lake, in central western Saskatchewan, and in the period July 21 to September 6, work was carried on in the area surrounding Flotten Lake and south to Meadow Lake. Specimens of the vertebrate faunas collected numbered 1,078, which are preserved in the study collection of the National Museum of Canada. The ornithological results of this expedition are the subject of the present paper.

ACKNOWLEDGMENTS

For the loan of specimens useful in taxonomic studies thanks are due: Dr. John W. Aldrich and Dr. Herbert Friedmann for specimens from the United States National Museum; Mr. L. L. Snyder and the Royal Ontario Museum of Zoology; Dr. Joselyn Van Tyne and the Museum of Zoology, University of Michigan; and Mr. Hoyes Lloyd for specimens from his private collection.

The writer is grateful also to: Mr. Fred G. Bard, Director, Saskatchewan Provincial Museum, who kindly furnished lists of specimens collected by him at Cochin, south of the Flotten Lake region, and in the Cypress Hills region; Messrs. Robert P. Allen, National Audubon Society, and Robert H. Smith, Flyway Biologist, U.S. Fish and Wildlife Service, who in the period May 13 to July 6, 1947, observed birds at Flotten Lake and region and made these spring notes available; Mr. E. L. Paynter, Saskatchewan Game Commissioner, who furnished information with reference to the introduction of the ruffed grouse into the Cypress Hills; and Mr. W. K. W. Baldwin, National Herbarium, who identified a number of plants collected by the expedition.

SYSTEMATIC LIST

In the following list all data for which no authority is indicated were obtained in 1948 by the National Museum's 1948 Saskatchewan expedition. A number in parentheses following a date is the number of bird individuals observed on that date.

Common Loon. *Gavia immer* subsp.

Cypress Hills Region. Perhaps a commoner migrant than records indicate but not known to breed. Taverner (MS.) heard one on Cypress Lake on May 19, 1921, but did not note it thereafter. Austin W. Cameron (MS.) observed a single bird also on Cypress Lake on July 28, 1946. The late L. B. Potter (in litt.) observed one near Eastend on May 10, 1938.

Cypress Hills birds are probably referable to *elasson*, but no specimens were taken.

Flotten Lake Region. In 1948 a common breeder noted on both large and small lakes. At Flotten Lake, four pairs of adults were regularly observed and downy young were noted. Observed also at Meadow Lake, Muddy Lakes, Waterhen Lake, and Jeanette Lake.

Holboell Grebe. *Colymbus grisegena holbölli* (Reinhardt)

Flotten Lake Region. Common breeder on Flotten, Jeanette, and Waterhen Lakes. At Flotten Lake it was partial to the southeast part of the lake where a broad stand of bulrush (*Scirpus*) was present, and here 66 adults and young were counted on August 7.

Robert P. Allen (MS.) noted, "Several pairs displaying May 13-May 20; other pairs followed and in all there were some 15 nests most of which had eggs by June 13".

Specimens, National Museum of Canada:

Flotten Lake: 2 ad. ♂, 1 juv. ♀, 1 downy; July 23 to Aug. 28, 1948

Horned Grebe. *Colymbus auritus* Linnaeus

Cypress Hills Region. Observed by the writer only once; an adult at Maple Creek dam on June 24. Bent (1907) found a few pairs breeding in June 1905 and 1906, at Crane Lake, then a large body of water. Taverner, in 1921, did not observe the species.

Eared Grebe. *Colymbus nigricollis californicus* (Heermann)

Cypress Hills Region. Common breeder on lakes and sloughs of the plains and artificial bodies of water; not noted in the wooded Cypress Hills.

In 1948 we observed it at Bigstick Lake, June 7(20); Cypress Lake, June 13(55), 17(16); near Robsart, July 8(2 adults and 7 downies).

Flotten Lake Region. Two were observed at Flotten Lake in spring of 1947 by Robert P. Allen (MS.).

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂; May 20, 1921

Western Grebe. *Aechmophorus occidentalis* (Lawrence)

Cypress Hills Region. Common breeder on larger bodies of water. Taverner counted 11 incubating birds in sight at once on the east end of Cypress Lake on June 8, 1921, but did not estimate the total population. On July 24, 1948, we found 44 adults at Maple Creek dam, and on this date two nests contained 3 and 4 eggs, respectively. Four were noted at Blacker Lake, Cypress Hills, on June 20. Bent (1907) recorded a very large breeding colony at Crane Lake in 1905 and 1906. On June 15, 1948, no western grebes were found on the shallow pond that now is all that remains of the once-large Crane Lake.

Flotten Lake Region. Large breeding colonies were observed by us in 1948 on both Flotten and Waterhen Lakes. The Flotten Lake colony contained about 80 adults, which were frequently accompanied by downy young. The western grebes confined themselves largely to the north end of the lake, whereas Holboell grebes were observed mainly in the southern end. Robert P. Allen and Robert H. Smith (MS.) noted the arrival of a flock of 50 on May 14, 1947, at Flotten Lake. In the period June 8 to 14 they observed from the air, colonies of this grebe at Primrose, Kazan, and Keely Lakes, north of the region.

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂, 1 ad. ♀; May 28 to June 4, 1921

Flotten Lake: 1 ad. ♂; Aug. 18, 1948

Pied-billed Grebe. *Podilymbus podiceps podiceps* (Linnaeus)

Cypress Hills Region. Taverner, in 1921, observed two at Cypress Lake on May 30, and a single bird on June 8.

Flotten Lake Region. Not observed in the Flotten Lake region. South of the region at Cochin, 24 miles north of North Battleford, however, this species was found breeding by Fred G. Bard and a nest containing 5 eggs was taken by him on June 19, 1935, for the Saskatchewan Provincial Museum.

White Pelican. *Pelecanus erythrorhynchos* Gmelin

Cypress Hills Region. Noted by Taverner in 1921 only twice when 4 were observed on June 4, and 9 on June 5 at Cypress Lake. In 1948, 8 at Cypress Lake were several times noted and 3 were observed on Blacker Lake in the Cypress Hills on July 7. Bent (1907) recorded 14 nests at Bigstick Lake, July 18 and 21, 1906, and Macoun (1900) records it breeding in numbers at Crane Lake, but there are no pelicans breeding at either of these places now.

Flotten Lake Region. On Flotten Lake it was noted as follows: July 22(41), 23(11), 24(6), 26(19), 27(13), 28(12), 29(15), 30(9), 31(13); August 2(7), 3(5), 4(11), 5(24), 6(5), 7(13), 9(12), 10(6), 11(13), 12(10), 13(7), 14(8), 16(6), 18(14), 19(6), 20(12), 21(20), 22(3), 23(8), 24(16), 25(6), 26(5), 27(6), 28(7), 30(3), 31(3); September 1 to 6 (a single bird on each date). Although it does not breed on Flotten Lake, it might well do so on Waterhen Lake where also it was observed.

Specimen, National Museum of Canada:

Cypress Lake: 1 ad. ♀; June 4, 1921

Double-crested Cormorant. *Phalacrocorax auritus auritus* (Lesson)

Cypress Hills Region. Macoun (1900) recorded 27 nests at Crane Lake on June 9, 1894, but Bent (1907) did not find the species there in 1905 or 1906, although he recorded 4 nests from Bigstick Lake on July 21, 1906. Because of the drying up of these lakes no cormorants breed there now. Taverner in 1921 noted the species only once: 6 at Cypress Lake on June 7.

Flotten Lake Region. Observed on Flotten Lake, as follows: August 7(1), 22(3), 23(2), 25(2), 26(4), 27(2), 28(9), 29(5), 30(3); September 1(1).

Specimens, National Museum of Canada:

Flotten Lake: 1 imm. ♂, 1 imm. unsexed; Aug. 30 to Sept. 1, 1948

Great Blue Heron. *Ardea herodias herodias* Linnaeus

Cypress Hills Region. Locally common about bodies of water mainly in the Cypress Hills, but occasionally noted feeding at sloughs on the short-grass prairie. Observed as follows: June 5(1), 8(1), 9(2), 10(3), 11(1), 12(1), 13(2), 16(2), 17(11), 18(1), 19(4), 20(6), 21(3), 22(2), 23(2), 24(7), 25(1), 26(5), 28(2); July 2(2), 3(1), 5(1), 7(5), 8(5). On July 13, a heronry was visited on upper Fairwell Creek in a splendid stand of balsam poplar bordering the creek. Considering the remoteness of this heronry it was disappointing to find 24 dead adults and juvenals on the ground below the nests. A rancher told Godfrey that the heronry had been visited 2 weeks previously by a group of armed "sportsmen". About 20 nests were still occupied on the date of our visit. Some of the juvenals were almost able to fly.

Taverner, in 1921, found this heron common in the marshes at the east end of Cypress Lake and we, in 1948, observed 7 there on June 18.

Flotten Lake Region. Noted only twice: an adult 9 miles south of Dorintosh, August 6, and a solitary bird at Otter Creek a few miles north of Dorintosh on August 12.

Specimens, National Museum of Canada:

Eastend: 1 ad. ♂; June 11, 1921

Cypress Lake: 1 ad. ♀; May 28, 1921

Fairwell Creek, Cypress Hills: 2 ad. ♂, 1 ad. ♀; July 13, 1948

The necks of these specimens average very slightly paler than those of specimens from eastern Canada, perhaps indicating a tendency toward *treganzai*.

Black-crowned Night Heron. *Nycticorax nycticorax hoactli* (Gmelin)

Cypress Hills Region. On July 5, 1948, the writer saw unmistakably an immature bird of this species $3\frac{1}{2}$ miles south of Maple Creek. The bird was following a wooded coulée and was winged, but a prolonged search in the tangle of shrubbery into which it dropped was unsuccessful.

Flotten Lake Region. C. F. Shirley, a keen woodsman who is familiar with great blue herons and bitterns, described adults of this species he has several times observed on the marshy shores of the sluggish Waterhen River, 11 miles west of Dorintosh. Although he has not seen it elsewhere, he said that many times in spring and summer he has observed as many as 6 at this point.

The A.O.U. Check-list (1931) does not include Saskatchewan in the range of this species. Mitchell (1924) recorded colonies at Moose Mountain, in the Qu'Appelle Valley, and at Deep Lake, Bradshaw (in litt. to P. A. Taverner) found a colony of about 20 pairs near Stalwart. Congdon (1903) recorded a colony at "Water-hen Lake" (presumably in the Basin Lake-Lake Lenore group). Todd (1947) records 2 specimens from Last Mountain Lake and a breeding record from near Quinn Lake. Taverner, in 1920, observed the species at Kutewagen Lake and at South Arm, Last Mountain Lake, obtaining 3 specimens from the latter locality.

American Bittern. *Botaurus lentiginosus* (Montagu)

Cypress Hills Region. Locally distributed, but not uncommon about sloughs and lakes both on the short-grass plains and in the wooded Cypress Hills.

Flotten Lake Region. Single specimens were observed on Waterhen River, July 21; Flotten Lake, July 28; Waterhen Lake, August 12; and two on Otter Creek, August 12.

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♀; July 28, 1948

Otter Creek (7 miles north of Dorintosh): 1 juv. ♂; Aug. 12, 1948

[Least Bittern. *Ixobrychus exilis* subsp. Although Macoun (1900) recorded a specimen taken in June 1894 at Crane Lake by William Spreadborough, the present whereabouts of such a specimen is unknown. According to Taverner (files, Nat. Mus., Canada), Spreadborough's MS. notes read, with reference to this species: "Crane Lake, 1894, saw one in slough June 12th". This appears to be the only evidence of the occurrence of the species in Saskatchewan and the species seems best placed in the hypothetical list.]

Whistling Swan. *Cygnus columbianus* (Ord)

Cypress Hills Region. According to Bent (1907) and Mitchell (1924) it was a common spring and autumn migrant on the larger lakes. The drying up of Crane and Bigstick Lakes since, however, removes two former attractions for this species.

Flotten Lake Region. C. F. Shirley told Godfrey in 1948 that he noted whistling swans regularly in spring and autumn migration. On May 13, 1947, Robert P. Allen (MS.) saw 8 flying across Flotten Lake.

Basin Canada Goose. *Branta canadensis moffitti* Aldrich

Cypress Hills Region. Breeds on larger bodies of water of the short-grass plains and the Cypress Hills. On June 7, 21 flew low over Loch Leven, Cypress Hills, and 6 were noted next day in flight over the same lake. On June 17, 2 pairs of adults were accompanied by 4 downies, and 10 other downies accompanied 4 adults at Cypress Lake. On June 20, 4 adults and 4 downies were seen on Blacker Lake, and on June 24 on Maple Creek dam 10 adults and 33 downies were counted.

Flotten Lake Region. Observed only on August 23 when 7 were seen in flight high over Flotten Lake. C. F. Shirley stated that they are regular spring and autumn migrants, but he had no evidence of breeding.

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♀, 1 downy; May 30 to June 11, 1921

Compared with two specimens of *interior* from James Bay (June 1 and July 22) the adults are slightly paler above and below. No breeding-season specimens of the nominate race were available for comparison, but the Saskatchewan birds lack the very pale area at the base of the neck that is possessed by *canadensis*. Size (culmen: 52.8 and 51.5; wing: 424 and 464 mm., respectively) is inconclusive.

Lesser Snow Goose. *Chen hyperborea hyperborea* (Pallas)

Taverner, in 1921, observed a single snow goose at the west end of Cypress Lake on May 21 and 26.

Common Mallard. *Anas platyrhynchos platyrhynchos* Linnaeus

Cypress Hills Region. Although Bent (1907) wrote that this species in 1905 and 1906 was "uncommon, but frequently seen in pairs and singly", Taverner in 1921 found it probably the commonest duck about Cypress Lake, but possibly exceeded numerically at Eastend by the pintail. In 1948, we found it very common at all the lakes, irrigation projects, and sloughs that we visited, breeding both on the plains and in the wooded Cypress Hills. On June 7, 246 were noted on Bigstick Lake, and on June 24 we noted about 250 at Maple Creek reservoir. This and the pintail were the most abundant ducks we observed.

Flotten Lake Region. Fairly common breeder, but much less common than in the Cypress Hills region. Noted as follows: July 22(7), 23(4), 24(1), 26(1), 27(21), 28(6), 30(4), 31(5); August 3(21), 4(13), 5(12), 6(39), 7(6),

9(13), 10(13), 11(3), 12(35), 13(2), 14(2), 18(6), 20(25), 22(6), 23(10), 25(5), 26(6), 27(2), 28(8), 29(12), 30(30), 31(18); September 1(8), 2(12), 3(15), 4(3), 5(11), 6(18). Most often noted on the margins of Waterhen and Meadow Rivers and along Otter Creek.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂; May 23, 1921

Gadwall. *Anas strepera* Linnaeus

Cypress Hills Region. Bent (1907) found this the commonest of the ducks in 1905 and 1906. Taverner in 1921 "saw a few gadwall almost daily at Cypress Lake. Not noted at Eastend". In 1948, we saw 56 at Bigstick Lake, June 7; 25 at Cypress Lake, June 13; 12 at Maple Creek reservoir, June 24. In addition, pairs and singles were noted at sloughs and smaller lakes, including 3 at Blacker Lake in the Cypress Hills.

Flotten Lake Region. Robert P. Allan (MS.) recorded 4 at Flotten Lake in spring of 1947.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 1 ad. ♀; May 25, 1921

Pintail. *Anas acuta tzitzihua* Vieillot

Cypress Hills Region. This and the mallard were in 1948 the commonest breeding ducks of the region. Approximately 200 were noted at Bigstick Lake on June 7 and 400+ were seen at Maple Creek, June 24. On smaller sloughs and lakes 15 to 30 were seen regularly.

Flotten Lake Region. Much scarcer and observed only as follows: Flotten Lake, July 27(1); Meadow River, near Meadow Lake, July 30(2); Waterhen River, August 3(2); Beaver River, August 6(3); Otter Creek, August 12(2).

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♀; June 8, 1921

Green-winged Teal. *Anas carolinensis* Gmelin

Cypress Hills Region. Bent (1907) found this a rare breeder in 1906 and 1907. Taverner in 1921 observed it only on June 3(2) and 8(4) at Cypress Lake. In 1948, it was noted by us at Maple Creek reservoir, June 24(8); Cypress Hills (The Gap), June 30(3); Blacker Lake, July 7(1).

Flotten Lake Region. Noted mostly on small woodland ponds as follows: July 31(2); August 4(1), 6(17), 16(2), 30(1), 31(3).

Specimens, National Museum of Canada:

Cypress Hills: 1 ad. ♀, June 30, 1948

Flotten Lake: 1 juv. ♀, 1 juv. unsexed; July 31 to Aug. 31, 1948

Blue-winged Teal. *Anas discors* Linnaeus

Cypress Hills Region. In 1948 this was one of the common breeding ducks both on the prairie sloughs and irrigation projects, and even in the wooded Cypress Hills where a nest with 7 eggs was seen on June 12. At Bigstick Lake on June 7 about 130 were observed and 85 were noted at

Maple Creek reservoir, June 24. In addition, the species was noted on June 8(1), 9(1), 15(4), 16(15), 17(20), 19(6), 20(6), 21(6), 26(24), 30(20); July 2(7), 3(20), 7(5), 8(12).

Flotten Lake Region. Much less common, but breeds. A female with 3 downy young at Beaver River, July 18. Noted also on July 27(5), August 3(1), 6(12), 12(3), 23(7), 28(3), 30(2), 31(1); September 3(4).

Specimen, National Museum of Canada:

Maple Creek: 1 ad. ♂; June 8, 1948

Cinnamon Teal. *Anas cyanoptera cyanoptera* Vieillot

Cypress Hills Region. Bent (1907) recorded sight observations of single males on Hay Creek, June 1, 1905, and at Crane Lake, June 17, 1906.

Baldpate. *Mareca americana* (Gmelin)

Cypress Hills Region. A fairly common breeder; in 1948 noted both in the vicinity of water on the plains and in the wooded Cypress Hills. A nest in the hills under lodgepole pine slashing was discovered on June 25. On July 5, 4 young had hatched by 9 a.m., and 10 had emerged from the shell by 2 p.m. They all were still in the nest at 8 p.m., but were gone next morning. Largest numbers noted at Maple Creek reservoir, about 50, June 16 and 24.

Flotten Lake Region. Not uncommon about the marshy edges of streams and lakes; breeds. On July 18, a female and 6 young were seen on Beaver River and the species was noted also in the region on July 27(2); August 3(2), 30(6); September 1(3).

Specimens, National Museum of Canada:

Cypress Lake: 4 ad. ♂; May 18 to June 3, 1921

Flotten Lake: 2 juv. ♂, 1 juv. ♀; Sept. 1, 1948

Shoveller. *Spatula clypeata* (Linnaeus)

Cypress Hills Region. One of the common breeding ducks in 1948 on the plains, sloughs, and lakes. At Bigstick Lake and nearby sloughs 105 were seen on June 7, and approximately 50 were noted at Maple Creek reservoir on June 24. Noted also on June 13(9), 15(30), 16(6), 17(15), 20(2), 21(3), 26(30), 30(10); July 3(8).

Specimen, National Museum of Canada:

Cypress Lake: 1 ad. ♀; June 8, 1921

Redhead. *Aythya americana* (Eyton)

Cypress Hills Region. Bent (1907) and Taverner in 1921 found this duck very common, and the latter recorded 300 at Cypress Lake on June 5. In 1948, it was noted on June 7(42) at Bigstick Lake, 17(15) at Cypress Lake, 24(3), 30(3); July 3(2).

Flotten Lake Region. A single specimen observed at close range on Waterhen River, August 3.

Specimen, National Museum of Canada:

Cypress Lake: 2 ad. ♂; June 4 to 9, 1921

Ring-necked Duck. *Aythya collaris* (Donovan)

Flotten Lake Region. Noted only at Flotten Lake, August 28(6), 29(5), 30(3), 31(4); September 1(1).

Specimens, National Museum of Canada:

Flotten Lake: 2 juv. unsexed; Aug. 28 to Sept. 1, 1948

Canvas-back. *Aythya valisineria* (Wilson)

Cypress Hills Region. Bent (1907) found this duck very common and breeding at Crane Lake. Taverner in 1921 saw 200 at Cypress Lake on June 7 and 8, mostly males. No such numbers were seen by us in 1948 and the species was noted only at Bigstick Lake, where 37 were present on June 7, and at Cypress Lake where 2 were seen on June 17.

Lesser Scaup. *Aythya affinis* (Eyton)

Cypress Hills Region. In 1921, Taverner noted this species as being fairly common at Cypress Lake and on May 23, he estimated 100 there and noted 50 on several dates. Bent (1907) recorded it as common and breeding at Crane and Hay Lakes. In 1948, we recorded about 50 at Bigstick Lake, June 7, and about the same number at Cypress Lake, June 13. It was noted also on June 16(2), 17(20), 20(6), 24(15), 26(15), 30(12), and July 3(3).

Flotten Lake Region. Noted only on the sluggish Waterhen River where a single individual was observed on July 20 and on August 3 a female was accompanied by 6 half-grown young.

Specimens, National Museum of Canada:

Cypress Lake: 3 ad. ♂, 1 ad. ♀; May 30 to June 2, 1921

American Golden-eye. *Bucephala clangula americana* (Bonaparte)

Flotten Lake Region. Noted in small numbers mostly on Flotten Lake and also, occasionally, on the smaller ponds and lakes: July 22 (2 ad., 6 young, and 13 young), 23(5 ad., 13 young), 24(2), 26(1 ad., 5 young), 27(1 ad. accompanied by 24 young), 28(6 ad., 10 young), 31(1); August 4(2), 5(1 ad., 7 young), 7(16), 9(5), 18(2), 20(2), 22(4), 23(9), 25(7), 28(3), 30(3), 31(4); September 1(5), 6(12).

Specimens, National Museum of Canada:

Flotten Lake: 1 juv. ♂, 2 juv. ♀; August 30 to Sept. 1, 1948

Buffle-head. *Bucephala albeola* (Linnaeus)

Cypress Hills Region. Bent (1907) doubtfully recorded a single bird of this species at Crane Lake. Taverner noted 'a few' males and females apparently courting at Cypress Lake in late May and early June, 1921. In 1948, we observed a male on Cypress Lake on June 13, 2 there on June 17, and 14 were seen at Maple Creek reservoir, June 24. Although we saw no evidence of the breeding of this species, the nearby wooded Cypress Hills would seem to be well suited to its nesting requirements.

White-winged Scoter. *Melanitta deglandi* (Bonaparte)

Cypress Hills Region. Bent (1907) found it a rare breeder. Taverner in 1921 saw ones and twos between May 27 and June 10, 1921 at Cypress Lake. In 1948, we observed 8 on a tiny lake several miles south of Bigstick Lake on June 7 and 3 on Cypress Lake, June 13.

Flotten Lake Region. Breeds. On a rocky 2-acre islet in Flotten Lake, a nest of this species was located on July 22, 1948. This contained 9 well-incubated eggs and was well concealed under raspberry-gooseberry bushes which covered most of the islet. The nest was later trampled and most of the eggs destroyed, apparently by sheep brought to this islet by one of the mink ranchers who lived nearby. No more than one bird was observed on Flotten Lake at any one time. This, thought to be the same individual flushed from the nest on July 22, was noted also on August 5, 12, and 21.

Ruddy Duck. *Oxyura jamaicensis rubida* (Wilson)

Cypress Hills Region. Taverner in 1921 observed 20 at Cypress Lake on May 23 and in June saw it there in small numbers (2 to 6). In 1948, we observed this species on June 7 (Bigstick Lake, 10), 17 (Cypress Lake, 1), 24 (Maple Creek reservoir, 2), 30 (Cypress Hills: The Gap, 5).

Specimen, National Museum of Canada:

Cypress Lake: 1 sub-ad. ♂; June 8, 1921

Hooded Merganser. *Lophodytes cucullatus* (Linnaeus)

Cypress Hills Region. Taverner, in 1921, observed this species only at Eastend where, on Frenchman River, he noted 4 on June 16 and one on June 18. These were females. Young observed one near Maple Creek on June 13, 1926. The wooded Cypress Hills and coulées might well meet nesting requirements, although there seems to be no direct evidence of breeding.

American Merganser. *Mergus merganser americanus* Cassin

Cypress Hills Region. Taverner and Laing in 1921 saw occasional specimens of this and the following species both at Cypress Lake and at Eastend. They observed females flying up coulées and thought that they might be nesting. An adult female collected by Laing at Little Frenchman Creek, near Eastend, June 27, 1921, bears the notation on the label "ov. slightly enl. (about 14 mm.)". Mitchell (1924) recorded it breeding in the Cypress Hills.

Flotten Lake Region. Breeds. Identified at Flotten Lake as follows: July 26(1), 28(2); August 2(9), 4(1), 5(1 ad. ♀, 6 downies), 8(1 ad. ♀, 6 downies), 10 (1 ad. ♀, 7 young), 11(1 ad. ♀, 5 young). On August 8, a downy young found dead at Flotten Lake, badly decomposed, was examined by the writer. Other mergansers were noted at distances too great for specific identification.

Specimen, National Museum of Canada:

Eastend: 1 ad. ♀; June 27, 1921

Red-breasted Merganser. *Mergus serrator serrator* Linnaeus

Cypress Hills Region. A few of the individuals seen by Taverner and Laing (see preceding species) perhaps referred to this species. Laing collected a very much worn, apparently non-breeding, female at Cypress Lake on May 28, 1921.

Flotten Lake Region. Breeds. This species was certainly identified, mostly on Flotten Lake, as follows: July 28 (1 ad. ♀, 15 downies), 29 (1 ad. ♂), 31 (1 ad. ♀, 15 downies); August 2 (1 ad. ♀, 12 downies), 6 (1 ad. ♂), 7 (2 ad. ♀), 11 (1 ad. ♀, 4 young), 12 (1), 14 (1 ad. ♀, 6 young). A few mergansers were noted under conditions that rendered specific identification uncertain or impossible.

Specimen, National Museum of Canada:

Cypress Lake: 1 ad. ♀; May 28, 1921

Western Turkey Vulture. *Cathartes aura teter* Friedmann

Cypress Hills Region. William Spreadborough (MS. notes, 1894) noted "East end of Cypress Hills. Saw several in the last week in June". Taverner and Laing in 1921 recorded it only once (2 at Eastend, June 28) and Young in 1926 did not see it at all. In 1948, we observed it only on June 30, on which date 3 were noted on the forested tops of the Cypress Hills about 4 miles east of the Alberta border. The only Saskatchewan specimen in the National Museum is a female from Indian Head taken June 11, 1892. It is decidedly referable to *teter*.

Eastern Goshawk. *Accipiter gentilis atricapillus* (Wilson)

Flotten Lake Region. MacDonald and Standfield observed this species at Flotten Lake on August 29 (2); September 1 (1), 2 (1). Fleming (1919) states that Buchanan took a female and a set of 3 eggs on Beaver River, May 16, 1914.

Eastern Sharp-shinned Hawk. *Accipiter striatus velox* (Wilson)

Cypress Hills Region. Macoun (1903) found a nest in the Cypress Hills, June 27, 1895. In 1921, Taverner noted it only once, a single male at Cypress Lake. Young in 1926 saw it near Maple Creek on May 24 (2), 31 (1); June 1 (1), 3 (1), 5 (1). In 1948, we noted it, always in the wooded Cypress Hills, as follows: June 12 (1), 18 (1), 24 (1), 28 (1), 29 (2); July 6 (1), 7 (1), 12 (1).

Flotten Lake Region. Rather common and widely distributed, increasing numerically in late August. July 20 (1), 21 (1), 23 (1), 27 (2), 31 (1); August 3 (1), 7 (1), 10 (1), 13 (1), 16 (1), 18 (1), 20 (2), 23 (1), 24 (1), 26 (6), 27 (2), 30 (2), 31 (3); September 1 (3), 2 (1), 3 (3), 4 (3), 6 (1).

Specimens, National Museum of Canada:

Cypress Lake: 1 imm. ♂; May 26, 1921

Maple Creek: 1 ad. ♂; June 1, 1926

Cypress Hills: 1 ad. ♂, 1 ad. ♀, 1 imm. ♂; June 28 to July 10, 1948

Flotten Lake: 1 juv. ♂, 3 juv. ♀; Aug. 17 to Sept. 1, 1948

Red-tailed Hawk. *Buteo jamaicensis* subsp.

Cypress Hills Region. Taverner, in 1921, did not observe this species at Cypress Lake or at Eastend. Young, in 1926, noted single birds on May 17 and 20 in the lower Cypress Hills near Maple Creek. In 1948, an adult observed by the writer near Cypress Hills Provincial Park on July 2 was the only observation.

Flotten Lake Region. Observed along Waterhen River about 6 miles west of Dorintosh on July 30(2) and August 3(1). Single birds were noted near Beaver River on August 6 and 12.

Harlan Hawk. *Buteo jamaicensis harlani* (Audubon)

Cypress Hills Region. Migrant. A female apparently adult, in the collection of Hoyes Lloyd, was taken at Skull Creek, near Piapot, on October 8, 1922, by H. Battersby.

Broad-winged Hawk. *Buteo platypterus platypterus* (Vieillot)

Flotten Lake Region. Rather common and generally distributed. Observed as follows: July 22(1), 23(4), 24(1), 26(1), 27(1), 28(1), 29(4), 31(2); August 2(1), 3(2), 7(2), 10(3), 12(4), 13(2), 14(1), 18(1), 20(3), 23(1), 24(5), 26(2), 27(1), 30(1), 31(2); September 2(6), 3(2), 4(5), 6(3).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♀; Aug. 20, 1948

This bird exhibits to some extent the characters of the dark phase described by Bailey (1917) and named 'iowensis' by him. Apparently a specimen taken by Buchanan and recorded by Fleming (1919) from Crooked River is also a dark phase bird, although another specimen from the same locality and one from Beaver River are presumably normally coloured.

Swainson Hawk. *Buteo swainsoni* Bonaparte

Cypress Hills Region. Bent (1907) found this the commonest hawk. In 1921, Taverner found it "common in nearly every coulée" at Cypress Lake and Eastend. In 1926, Young observed it almost daily in numbers varying from 2 to 8. Rand (1948), however, working on the Alberta side of Cypress Hills found relatively sparse populations in 1945 (only 10 between July 5 and 13). In 1948, we found this much the commonest hawk of the region, most common about the unwooded lower slopes of the Cypress Hills and contiguous plains areas. It appeared least numerous in the arid country between Govenlock and the Montana border. Nests were noted on June 19 and 24, respectively, in box elder (*Acer negundo*). This beneficial hawk was frequently seen preying on the Richardson ground squirrel (*Citellus richardsoni*) and obviously large numbers of harmful rodents are destroyed by it. It was observed as follows: June 3(3), 4(3), 7(6), 8(6), 9(1), 10(10), 11(2), 12(2), 13(12), 14(3), 15(29), 16(20), 17(16), 19(14), 20(1), 21(19), 22(2), 24(14), 26(15), 28(2), 29(3), 30(4); July 4(5), 3(8), 5(11), 7(3), 8(10), 12(11), 13(5).

Although this species was not noted in the Flotten Lake region it was seen in small numbers near North Battleford, July 15; 2 were noted by the writer near Jackfish Lake on August 17.

Specimens, National Museum of Canada:

Cypress Lake: 3 ad. ♂, 1 ad. ♀; June 11, 1921 and June 21, 1948

Eastend: 2 ad. unsexed; "fall" 1921, and Aug. 11, 1931

Maple Creek: 1 ad. ♂, 1 ad. ♀; June 10 to July 12, 1948

Ferruginous Rough-legged Hawk. *Buteo regalis* (Gray)

Cypress Hills Region. Taverner in 1921 found this hawk "quite common" in the coulées on the north side of Cypress Lake and among the buttes near Eastend. He found many nests, some in use but most abandoned. Young in 1926 noted only 2 of these hawks, one on May 22, another on May 25. In 1948 we observed it near buttes and coulées on the plains and lower Cypress Hills: June 3(1), 7(2), 15(2), 16(2), 19(2), 21(1); July 5(1).

Golden Eagle. *Aquila chrysaëtos canadensis* (Linnaeus)

Cypress Hills Region. An adult on June 19, some 10 miles southwest of Maple Creek, was our only observation. There is a specimen in the Saskatchewan Provincial Museum which was taken at Maple Creek by E. C. R. Harris at an unknown date.

Flotten Lake Region. MacDonald and Standfield noted one at Jeanette Lake on August 2, 1948. C. F. Shirley has taken 4 in recent years in the region, all in winter. One of these, mounted, was seen by the writer at Dorintosh. It was shot at Mustus Lake where it had been feeding on a varying hare.

Northern Bald Eagle. *Haliaeetus leucocephalus washingtonii* (Audubon)

Cypress Hills Region. Although there are one or two vague records for the region, the only definite information seems to be contained in a letter to P. A. Taverner from L. B. Potter, dated December 6, 1919, which reads "The Bald Eagle still nests at the head of the Little Frenchman Creek". Taverner made no certain observations of the species in 1921, however; nor did we in 1948.

Flotten Lake Region. Noted only near Flotten Lake where 2, one a sub-adult, sometimes came apparently to feed on the beach or to sit in a particular white spruce. Noted as follows: July 22(1); August 4(1), 7(1), 9(1), 11(1), 12(2), 13(2), 14(2), 15(1), 22(1), 25(1); September 3(1). Although no Saskatchewan specimens are available, a summer immature male from Lac la Biche, Alberta, is referable to *washingtonii* (wing, 620 mm.).

Marsh Hawk. *Circus cyaneus hudsonius* (Linnaeus)

Cypress Hills Region. One of the common hawks of the region, on the plains and the treeless parts of the Cypress Hills. Noted in 1948 on June 3(3), 4(3), 7(3), 10(2), 13(2), 15(4), 16(4), 17(7), 19(6), 21(4).

22(1), 23(2), 24(8), 25(1), 26(6), 28(3), 30(2); July 3(4), 5(1), 7(1), 8(4), 12(3), 13(1). This status agrees with Taverner's 1921 observations at Cypress Lake and Eastend.

Flotten Lake Region. Not uncommon where settlement has made clearings between Flotten Lake and Meadow Lake. Frequents also woodland meadows and larger bogs. Observed on July 23(2), 30(2); August 3(1), 4(1), 5(2), 6(3), 11(1), 12(1), 25(1), 31(1); September 1(1).

Specimens, National Museum of Canada:

Cypress Lake: 1 imm. ♂; June 7, 1921

Flotten Lake: 1 juv. ♀; Aug. 5, 1948

Osprey. *Pandion haliaetus carolinensis* (Gmelin)

Cypress Hills Region. The only records appear to be those of Potter (1943a) near Eastend who recorded observations of single birds on June 9, 1931; October 6, 1940; and September 5, 1941.

Flotten Lake Region. A single bird was observed over Flotten Lake on August 3, 29, and 30, respectively.

Prairie Falcon. *Falco mexicanus* Schlegel

Cypress Hills Region. In 1921, Taverner saw a single bird on May 23 and another on May 25 at Cypress Lake and Laing saw one near Eastend on June 22. Young in 1926 did not observe the species. In 1948, our only observations were of one on the dry plains 10 miles south of Govenlock on June 21, and of 3 at the west end of Old Man on His Back Plateau on July 8. That it breeds is attested by a set of 4 eggs in the National Museum taken at Battle Creek (which flows from Cypress Hills) by J. E. Bowman on May 3, 1914.

Specimen, National Museum of Canada:

Old Man On His Back Plateau: 1 juv. ♂; July 8, 1948

Richardson Pigeon Hawk. *Falco columbarius richardsonii* Ridgway

Cypress Hills Region. In 1948 observed only once. A single bird in the forested upper Cypress Hills was noted by Standfield on July 5. Taverner in 1921 and Young in 1926 did not record it. Potter (1930) said that this hawk used to nest commonly near Eastend. Spreadborough in 1894 collected a pair in Cypress Hills.

Specimens, National Museum of Canada:

Cypress Hills: 1 ad. ♂, 1 ad. ♀; June 26, 1894

The species was noted near Flotten Lake on August 16 and 19, but as no specimens were taken the racial status of these could not be ascertained.

Eastern Sparrow Hawk. *Falco sparverius sparverius* Linnaeus

Cypress Hills Region. Common breeder. Noted most frequently in the Cypress Hills, but noted also on the plains in the vicinity of wooded coulées and even about planted groves near ranch houses. A nest with 5 eggs in a flicker hole 9 feet up in a cottonwood near Maple Creek on June 12. The

species was observed on June 3(2), 4(2), 7(2), 8(3), 10(2), 16(1), 17(1), 19(1), 22(2), 24(6), 26(8), 28(4); July 2(2), 3(2), 5(5), 6(1), 8(2), 12(4 ad.; and 5 well-developed young in nest described above), 13(12).

Flotten Lake Region. Fairly common in more open, wooded areas about Flotten Lake. It was observed on July 23(3), 24(4), 26(2), 29(1), 30(7), 31(3); August 2(2), 3(12), 6(4), 12(4), 13(2), 22(1), 24(1), 28(1); September 2(1), 3(10).

Specimens, National Museum of Canada:

Eastend: 1 ad. ♀; June 25, 1921

Cypress Hills: 1 juv. ♂; July 13, 1948

Flotten Lake and Dorintosh: 1 ad. ♂, 1 juv. ♂; Aug. 12 to 24, 1948

Hudsonian Spruce Grouse. *Canachites canadensis canadensis* (Linnaeus)

Flotten Lake Region. Common breeder and permanent resident in coniferous and mixed woodland. Noted as follows: July 22(1 ad., 3 half-grown young), 24 (2 ad., 9 young), 27 (2 ad., 3 young), 28(1 ad.), 29 (2 ad., 9 young); August 2(3), 3(15), 5(2 ad., 8 young), 7(6), 10(2), 12(2), 14(8), 16(11), 18(3), 20(5), 24(10), 26(1), 27(10), 30(12), 31(9); September 1(3), 2(8), 3(4), 4(16), 6(2). On August 3 a group of 15 spent the day near camp. This flock was composed mostly of rufous-crowned juvenals although at least 2 adult females and one adult male were present, the only instance observed of association of an adult male with a family group. The male frequently strutted about with neck and lateral breast feathers raised, tail held vertically and spread widely as also were the under tail coverts. With wings lowered and almost touching the ground, he ran about suggesting a miniature turkey.

Two notes only were heard by the writer, the familiar *krrrrruk* of the adult female and occasionally a melancholy disyllabic whistle from the young. A crude imitation of the former elicited interesting reactions. The young males raised and spread their tails, and with drooping wings made little charges as though looking for an adversary. The young were observed several times eating the fruit of the dry-ground cranberry (*Vaccinium vitis-Idaea*).

Specimens, National Museum of Canada:

Flotten Lake: 2 ad. ♂, 4 ad. ♀, 10 imm.; July 24 to Sept. 6, 1948

Gray Ruffed Grouse. *Bonasa umbellus umbelloides* (Douglas)

Cypress Hills Region. Introduced. Taverner in 1921 and Young in 1926 did not record it. Potter (1930) said that this grouse was introduced within 10 miles of Eastend in the spring of 1922, but at the time he wrote he doubted that any survived. Rand (1948) was told in 1945 that it was introduced "about 20 years ago", on the Alberta side of the Cypress Hills, but his party failed to observe it.

Mr. E. L. Paynter, Saskatchewan Game Commissioner, writes (in litt.) in this connection as follows: ".... I have received information that the ruffed grouse in question were live-trapped by one R. H. Carter of Muscow, Saskatchewan, which lies about 35 miles northeast of Regina near the banks of the Qu'Appelle Valley. They were released on Section 21,

Township 9, Range 25, West of the Third Meridian". Mr. Paynter said further that, as near as he could ascertain, these grouse were liberated in 1922.

On the Saskatchewan side of the Cypress Hills we observed it in 1948 only in the upper hills mainly in aspen or lodgepole pine woodland, as follows: June 5(2), 8(1), 9(3), 10(1), 25(3); July 2(2 ad. ♀, 6 young), 13(1 ad. ♀, 7 young).

Flotten Lake Region. Noted on July 20(1 ad. ♀, 3 young), 24(2 ad. ♀, 8 young), 26(1), 27(1), 29(2), 30(1); August 3(2), 6(9), 14(6), 16(9), 23(7), 27(3), 30(26); September 2(10), 3(23), 4(16), 6(1).

Specimens, National Museum of Canada:

Cypress Hills: 3 ad. ♂, 1 ad. ♀; June 9 to July 2, 1948

Flotten Lake: 4 ad. ♀, 2 imm.; July 24 to Aug. 27, 1948

Great Plains Sharp-tailed Grouse. *Pedioecetes phasianellus jamesi* Lincoln

Cypress Hills Region. Apparently subject to considerable fluctuations in numbers. In 1948, we found it common at the edges of treeless areas, in higher parts of the Cypress Hills where shrubby cinquefoil replaced the sagebrush of lower altitudes, and in the more open willow coulees. It was observed as follows: June 11(17), 12(14), 19(5), 22(15), 23(ad. ♀, 12 young), 29(1 ad. ♀, 7 young), 30(3 ad. ♀, undetermined number of young); July 1(1). Spreadborough (MS.) found it abundant in 1894. Bent (1907) found it common. Taverner in 1921 found it "far from abundant", observing not more than 8 in any one day. Young in 1926 observed it almost daily in small numbers, with 15 the largest number seen in a day.

Flotten Lake Region. Although not observed in the heavily wooded country about Flotten Lake, it was noted in brushy fields about settlement between there and Meadow Lake, as follows: July 18(1), 19(2 ad., 4 young), 22(1), 23(2), 30(20); August 3(6), 6(15), 12(6), 13(13), 21(20); September 3(60).

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂, 1 ad. ♀; June 6, 1921

Eastend: 1 ad. ♀; June 18, 1921

Cypress Hills: 4 ad. ♂; June 11 to 22, 1948

Near Dorintosh: 3 ad. ♀, 2 juv.; August 3 to 13, 1948

No specimens of *campestris* were available for comparison. However, the Saskatchewan material listed above does not appear to differ from southwestern Manitoba birds (Carberry, Whitewater Lake, and Oak Lake) or from central Alberta material.

Sage Hen. *Centrocercus urophasianus* (Bonaparte)

Cypress Hills Region. Taverner and Laing did not observe it in 1921, nor did Young record it in 1926. Potter (1930) refers to the "disappearance" of the sage hen at that time and apparently it had become very scarce. In 1948, however, we found this interesting grouse not uncommon on the sagebrush plains between the Montana border and the Cypress Hills, but did not observe it north of them. On June 21 a female and 7 downy young were noted in the upper wooded part of the Cypress

Hills where, in the openings, sagebrush almost completely was replaced by shrubby cinquefoil. All other observations were on the sagebrush plains as follows: June 13(2), 21 (flock of 34 at evening, 2½ miles west of Vidora; 1 ad. ♀ and 4 young, 1½ miles northeast of Senate); July 8(1 ad. ♀ and 2 young between Divide and Claydon; 9 adult males 8 miles northwest of Robsart). This species appears to have increased numerically in recent years.

Specimens, National Museum of Canada:

Whitemud: 1 ad. ♀, 1 downy; April 3 to June 23, 1935

Divide: 3 imm. ♂, 1 ad. ♀; October 1, 2, 1945, July 8, 1948

Robsart: 1 ad. ♂, 1 ad. unsexed; July 8, 1948

Aldrich (1946) described *C. u. phaios*, type locality Fremont, Oregon, but no material from the range postulated for that race is available for examination for the present study.

European Partridge. *Perdix perdix perdix* (Linnaeus)

Cypress Hills Region. This introduced species was noted on the plains near the Cypress Hills, but not in the wooded higher parts, as follows: June 3(1), 8(2), 13(3), 15(1), 16(5), 17(1), 19(2), 21(3), 24(2), 26(1); July 8(2), 15(2). Potter (1930) first observed it at Eastend about 1924. However, Hoyes Lloyd (MS) noted it 2 years before this between Bigstick Lake and Piapot where 26 were seen on October 7, 1922.

Common Pheasant. *Phasianus colchicus* Linnaeus

Cypress Hills Region. In 1948 this introduced species was observed on the plains usually near wooded coulees and up to the lower edges of forest in the Cypress Hills, as follows: June 8(1), 10(1), 11(1), 13(2 ad. ♀, 6 downy young), 19(1), 21(1), 24(2); July 13 (1 ad. ♀, 12 young in coulée on upper Fairwell Creek). The pheasant was not observed by Taverner in 1921 or by Young in 1926.

Little Brown Crane. *Grus canadensis canadensis* (Linnaeus)

Cypress Hills Region. Bent (1907) recorded a mounted specimen seen by him in a taxidermist shop at Maple Creek, said to have been taken in that vicinity. Potter (1943b) recorded a specimen collected at Skull Creek, south of Piapot, by S. A. Mann on May 8, 1930. Potter in a letter to Taverner (Nat. Mus., Canada files) stated, "Sandhill Cranes (subsp. ?) passed over us on October 4, 1941, in hundreds". This was at Eastend.

Flotten Lake Region. In 1948, cranes of this species were observed, all in flight, as follows: August 16(4), 18(17), 19(23 observed and 3 additional flocks heard), 20(7 and another flock heard), 24(11), 25(2 flocks heard), 26(11), 27(25), 27(1 flock heard), 29(9), 31(9); September 1(26). Most of these birds appeared to be migrants and probably are referable to *canadensis*, but no specimens were obtained to verify this. C. F. Shirley told the writer that a few cranes still summer near Dorintosh and, although he has no actual evidence of breeding, he suspects that they do so. These might be referable to *tabida*. Robert P. Allen and R. H. Smith (MS.)

saw this species east of Primrose Lake, northwest of the region, on June 8, 1947. Near Beaver River they saw 5 on the following date, 2 of which were nesting. These, too, may have been *tabida*.

Virginia Rail. *Rallus limicola limicola* Vieillot

A rail almost certainly of this species was heard by the writer at Meadow Lake on July 17, 1948. Such occurrence seems not unlikely as Mowat (1947) reported it not uncommon as far north as Emma Lake. Neither Bent (1907), Taverner, Young, nor our 1948 party found any evidence of its occurrence in the Cypress Hills region of Saskatchewan, although at Many Islands Lake, just across the provincial boundary in Alberta, the writer saw a Virginia rail on July 3, 1948. A photograph (Nat. Mus., Canada files) taken at Whitemud by C. F. Holmes in September 1936, is readily identified as that of a Virginia rail.

Sora Rail. *Porzana carolina* (Linnaeus)

Cypress Hills Region. Taverner and Laing in 1921 found this rail common in marshes at the east end of Cypress Lake but did not record numbers. Bent (1907) found nests on June 24, 1906. In 1948, we found it locally distributed in suitable marshes on the plains, but did not note it in the wooded Cypress Hills. Noted on the following dates: June 13(3), 17(1); July 3(2), 8(4).

Flotten Lake Region. Not uncommon along margins of the sluggish Waterhen and Meadow Rivers, marshy shores of Flotten Lake and marshy edges of woodland ponds. In the *Carex-Juncus* margins of one such pond an abandoned nest, apparently of this species, was located on July 29. The species was observed on July 17(2), 18(1), 23(1), 27(1), 29(2), 30(1), 31(1); August 3(3), 6(1), 12(4), 16(1), 19(1), 23(1), 28(7), 29(1), 30(1), 31(6); September 1(2), 6(1).

Specimens, National Museum of Canada:

Eastend: 1 juv. ♂; Aug. 22, 1927

Flotten Lake: 1 ad. ♂, 2 juv. ♂, 1 juv. unsexed; Aug. 16 to 28, 1948

Yellow Rail. *Coturnicops noveboracensis noveboracensis* (Gmelin)

Cypress Hills Region. Mr. E. E. Boynton, Sagathun (near Maple Creek) submitted for corroboration of his identification as yellow rail, feathers from a rail caught in late August 1929, on hay flats there. He noted that the bird could fly, but preferred to hide, and it was caught by placing a hat over it. Mr. Taverner examined these feathers on September 9, 1929, and noted "The feathers spoken of are back feathers, dark blackish with narrow ochre edges and crossed by two distinct and sharp, narrow white bars,—unmistakably Yellow Rail".

Although this species was not observed in the Flotten Lake region, there is a specimen in the Saskatchewan Provincial Museum collected by R. D. Symons, through Arthur Vine, near Battleford, farther south, on July 6, 1934. Mr. Symons, who was familiar with this rail's distinctive notes, believed that he heard it also at Scentgrass Lake, Medstead, south side of Jackfish Lake, Maidstone, and Lloydminster (report transmitted to National Museum by Fred Bradshaw, in litt., 1934).

American Coot. *Fulica americana americana* Gmelin

Cypress Hills Region. Taverner in 1921 saw as many as 20 in a day in marshes at the east end of Cypress Lake, and Young recorded 20 on several days in 1926. In 1948, we recorded it locally at sloughs both on the plains and in the Cypress Hills. On July 5, a nest was noted at Cypress Lake. The species was noted as follows: June 7(4), 13(5), 19(2), 24(2), 30(1); July 3(1), 8(1).

Flotten Lake Region. Observed only on marshes of Waterhen River, Waterhen Lake, and Flotten Lake: August 3(2 ad., 1 juv.), 12(4), 13(3), 18(1), 29(6).

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♀; May 23, 1921

Belted Piping Plover. *Charadrius melodus circumcinctus* (Ridgway)

Cypress Hills Region. Not recorded by Taverner or Young. In 1948, 3 adults were observed by MacDonald and the writer at Crane Lake on June 15, but we did not observe it at nearly-dry Bigstick Lake where Bent (1907) found it abundant in 1905 and 1906.

Semipalmated Plover. *Charadrius hiaticula semipalmatus* Bonaparte

Cypress Lake Region. Migrant. Bent (1907) recorded "a number" at Bigstick Lake on July 19, 1906, and that 2 specimens were taken.

Flotten Lake Region. Migrant. Noted on beaches of Flotten Lake as follows: August 2(1), 9(1), 11(2), 19(2), 26(1).

Mountain Plover. *Eupoda montana* (Townsend)

Cypress Hills Region. J. Dewey Soper (1939) observed very carefully under excellent conditions a bird of this species near Bracken on June 5, 1939, the first record for Canada. Although a sight record only, the diagnostic markings were noted with certainty, in this case by a very competent observer. The validity of this record is further substantiated by Mr. Soper in that he later collected 2 specimens in southern Alberta (Soper, 1941).

Killdeer. *Charadrius vociferus vociferus* Linnaeus

Cypress Hills Region. This conspicuous shorebird is common about the sloughs and lakes of the plains, less so in the wooded Cypress Hills. In 1948 it was noted as follows: June 4(2), 6(20), 8(3), 13(8), 15(5), 16(6), 17(11), 19(5), 20(1), 21(12), 24(26), 26(10), 28(2), 30(6); July 3(8), 6(3), 7(2), 8(15). Partly grown young were observed on June 13, 16, and 19. Bent (1907), Taverner, and Young also found this species common.

Flotten Lake Region. Uncommon on the beaches of Flotten Lake and in the clearings farther south. Noted in 1948 on July 21(1), 23(1), 27(5), 28(2), 30(1); August 6(2), 14(1).

American Golden Plover. *Pluvialis dominica dominica* (Müller)

Cypress Hills Region. Migrant. Austin L. Rand (MS.) recorded this species on October 8, 1945, as follows "On a grassy place near north shore of Bigstick Lake perhaps 200 scattered about over a considerable area".

Black-bellied Plover. *Squatarola squatarola* (Linnaeus)

Cypress Hills Region. Bent (1907) found it an abundant migrant in 1905. Taverner in 1921 saw 8 on May 23 and one on May 28 at Cypress Lake.

Ruddy Turnstone. *Arenaria interpres morinella* (Linnaeus)

Cypress Hills Region. Taverner in 1920 observed one at Bigstick Lake on August 9, and another at Crane Lake on August 11.

Wilson Snipe. *Capella gallinago delicata* (Ord)

Cypress Hills Region. Bent (1907) noted one at Hay Creek, July 6, 1906. Macoun (1900) records young able to fly June 24, 1894, at the east end of Cypress Hills. Taverner in 1921 and Young in 1926 did not record it. In 1948, one was flushed from the edge of Blacker Lake, in the Cypress Hills, on June 20 and again on June 23. On July 8, a single bird was flushed at the east end of Cypress Lake.

Flotten Lake Region. Common but locally distributed on moist meadows and marshy edges of lakes and streams. On August 12, 1948, 24 were flushed from a 20-acre moist *Carex-Juncus* meadow near Beaver River. The species was noted also on July 29(1); August 6(4), 23(1), 28(3), 31(8); September 1(4). F. G. Bard found a nest with 3 eggs at Cochin, south of the region, on June 3, 1935.

Specimens, National Museum of Canada:

Cypress Hills: 1 ad. ♀; June 23, 1948

Dorintosh (7 miles north): 1 ad. ♂, 1 ad. ♀; Aug. 12, 1948

Northern Long-billed Curlew. *Numenius americanus parvus* Bishop

Cypress Hills Region. In 1948, this curlew was not uncommon on the prairie both south and north of the Cypress Hills. It was noted as follows: June 7 (2 at Bigstick Lake), 16(2, 2 miles north of Maple Creek; their actions suggesting the presence of young), 17(9, 5 miles east of Robsart), 19(3, 2 miles southeast of Downey Lake), 21(6, 6 miles northwest of Robsart), 26(1), 38(1); July 3(2), 8(12, between lower Cypress Hills and the Montana border), 13(1), 15(11, between Gull Lake and Antelope).

Bent (1907) found this species "tolerably common" in scattered pairs and small flocks of from 5 to 7 birds. Taverner in 1921 saw it regularly near Cypress Lake and Eastend. He recorded as many as 10 in a day. He located a nest with 4 eggs on May 24 in the Cypress Lake area, "a hollow in the ground lined with scanty grasses" and situated nearly a mile from the nearest water. Young in 1926 saw 6 on June 9, and on July 8 he noted 4.

Specimens, National Museum of Canada:

Cypress Lake: 4 ad. ♂, 1 ad. ♀; May 20 to 27, 1921

Robsart (4 miles northwest); 1 juv. ♂; July 8, 1948

Since the above specimens are near topotypes of *N. a. parvus*, the type locality of which is Crane Lake, their measurements are given (in mm.):

4 ad. ♂: Wing 247-262 (average, 254.2);
Culmen, 114-130 (119.2).

1 ad. ♀: Wing, 274;
Culmen, 160.

Upland Plover. *Bartramia longicauda* (Bechstein)

Cypress Hills Region. A fairly common summer resident in 1948 occurring on the prairies and more often on the treeless areas on the upper Cypress Hills. It was observed on June 7(7), 10(4), 13(2), 15(4), 16(1), 19(4), 22(1), 23(3), 24(5), 28(2), 29(2), 30(8); July 3(6), 5(1), 7(3), 8(1).

Bent (1907) found it common and breeding on the prairies and meadows. Taverner, strangely enough, did not record it in 1921, but Young in 1926 saw it regularly in numbers up to 5 in a day.

Specimens, National Museum of Canada:

Cypress Hills: 2 ad. ♂; June 12 to 23, 1948

Spotted Sandpiper. *Actitis macularia* (Linnaeus)

Cypress Hills Region. In 1948 it was not uncommon about small lakes and streams of the Cypress Hills and at Cypress Lake, but it was scarcer out on the prairie sloughs. It was observed on June 6(2), 7(1), 8(1), 11(1), 12(1), 13(4), 17(10 at Cypress Lake and Belanger Creek), 21(1), 24(19, including a downy young from upper Maple Creek to Maple Creek dam), 26(8), 29(1); July 3(1), 7(1), 8(6), 12(1).

Bent (1907) found it uncommon; noted 2 nests on June 14, 1906. Taverner noted it as fairly common about Cypress Lake in 1921, but Young in 1926 noted only 4 on June 12, and one on July 8.

Flotten Lake Region. Common about the lakes and streams throughout. We noted it as follows: July 18(3), 19(2), 21(3), 22(4), 23(7), 24(8), 26(6), 27(10), 28(5), 29(4), 30(5), 31(8); August 2(8), 3(5), 4(9), 5(13), 6(12), 7(6), 9(6), 10(6), 11(7), 12(3), 13(3), 14(7), 16(3), 18(5), 19(3), 20(10), 21(8), 22(3), 23(6), 24(4), 25(6), 26(5), 27(4), 28(5), 29(3), 30(5), 31(6); September 1(3), 2(4), 4(1), 5(6), 6(4).

Specimen, National Museum of Canada:

Flotten Lake: 1 ad. ♂; July 23, 1948

Eastern Solitary Sandpiper. *Tringa solitaria solitaria* Wilson

Cypress Hills Region. Bent (1907) quotes Bishop that this form is a "tolerably common migrant". Specimens taken on July 6 and 30 are referred to this race. Conover (1944) recorded 2 Maple Creek immatures and 2 adults of this race.

Flotten Lake Region. In 1948 this species was observed beside lakes, ponds, and streams as follows: July 18(4), 27(2), 30(1), 31(6); August 2(2), 5(1), 6(12), 13(4), 21(2), 24(2), 30(6). Although we arrived in the region too late in the season to investigate breeding, the species is recorded as breeding at Big River and Beaver River (Mitchell, 1924). Specimens collected are all *solitaria*, but *cinnamomea* probably occurs as a migrant and some field observations might refer to the latter race.

Specimens, National Museum of Canada:

Flotten Lake: 2 juv. ♂, 1 juv. ♀; July 27 to Aug. 6, 1948

These 3 specimens are, in dorsal coloration and in immaculate primaries, referable to *solitaria*.

Western Solitary Sandpiper. *Tringa solitaria cinnamomea* (Brewster)

Cypress Hills Region. Bent (1907) quotes Bishop, who took specimens, that this is a "tolerably common migrant". Conover (1944) referred 3 adults and 2 immatures, all from Maple Creek, to this race.

Western Willet. *Catoptrophorus semipalmatus inornatus* (Brewster)

Cypress Hills Region. In 1948 a fairly common breeder, found at the larger sloughs and lakes of the prairies and more rarely in the Cypress Hills up to forest edge. It was noted on June 7(8), 13(7, including a downy), 15(5), 16(2), 17(8), 21(9, including 3 downies), 24(10), 26(27, including 2 downies); July 3(6), 7(3), 8(5). A young bird, estimated to be about a week old, did not hesitate to swim across a 10-foot-wide ditch at Maple Creek dam on June 26. The writer noted this species north to North Battleford where he saw 2 on July 16. Robert P. Allen (MS.) noted the species at Cochin about 24 miles north of North Battleford in May 1947. It was not observed in the Flotten Lake region either by Allen in 1947 or by us in 1948.

Macoun (1900) recorded that Spreadborough found it common in marshes about Crane Lake in June 1894. Bent (1907) found it very common about all the lakes. Taverner in 1921 considered it fairly common at Cypress Lake and Young in 1926 noted as many as 8 in a day.

Specimens, National Museum of Canada:

Crane Lake: 1 ad. ♂; June 7, 1894
Near Maple Creek: 1 downy ♂; June 12, 1926
Robsart: 1 ad. ♂; June 17, 1948
Cypress Lake: 1 ad. ♂; June 17, 1948

Greater Yellow-legs. *Totanus melanoleucus* (Gmelin)

Cypress Hills Region. Migrant. Bent (1907) recorded a few at Crane Lake late in June 1906, and took a specimen on August 2. That the species is a common autumn migrant is attested by Taverner's observations in 1920 of an estimated 100 individuals at, respectively, Bigstick, Crane, and Bitter Lakes, August 8 to 10. Neither Taverner in 1921, Young in 1926, nor our party in 1948 recorded it in spring migration or early summer.

Flotten Lake Region. In 1948 it was noted on August 1(1), 5(1), 6(5), 12(1), 14(2). Observations were at Flotten Lake, Meadow River, Waterhen River, and Waterhen Lake.

Lesser Yellow-legs. *Totanus flavipes* (Gmelin)

Cypress Hills Region. Bent (1907) suspected that it might breed at Bigstick Lake. Taverner in 1921 saw only one bird (Cypress Lake, May 27). Young in 1926 did not record the species. In 1948, we observed it only at Maple Creek dam where on June 26, 2 flocks totalling 17 individuals were seen.

Flotten Lake Region. Noted in singles and small flocks frequenting marshy edges of lakes and rivers and the sand beaches at Flotten Lake. Observed as follows: July 18(4), 19(2), 24(4), 27(7), 28(4), 29(1), 30(15), 31(16); August 1(6), 2(3), 3(6), 4(1), 6(7), 9(1), 10(2), 11(1), 13(3), 14(1).

Pectoral Sandpiper. *Erolia melanotos* (Vieillot)

Cypress Hills Region. Migrant. Bent (1907) recorded specimens taken by Bishop and Dwight at Bigstick Lake, July 18 to 22, 1906. Taverner in 1920 saw one at Crane Lake, on August 11. Neither Taverner in 1921, Young in 1926, nor we in 1948, recorded it in spring or early summer.

Flotten Lake Region. In 1948 this species was noted at Flotten Lake only on August 14(1), 16(2), and 22(1).

[White-rumped Sandpiper. *Erolia fuscicollis* (Vieillot). Macoun's (1900) statement that a few have been seen at Crane Lake is vague, and it has not been recorded by other observers, although it may well occur in migration.]

Baird Sandpiper. *Erolia bairdii* (Coues)

Cypress Hills Region. Migrant. Bent (1907) quotes Bishop as having noted 50 of these, 10 miles north of Maple Creek on July 17, and other observations in the region. Taverner in 1920 saw small numbers at Crane and Bigstick Lakes, August 9 and 10.

Flotten Lake Region. Migrant. In 1948 a single individual was noted feeding on floating vegetation on Waterhen River; one was noted on Flotten Lake, August 21; and 2 at the latter locality on August 27.

Specimens, National Museum of Canada:

Flotten Lake: 1 juv. ♀, 1 juv. unsexed; Aug. 21 to 27, 1948

Least Sandpiper. *Erolia minutilla* (Vieillot)

Cypress Hills Region. Migrant. Bent (1907) quotes Bishop as having collected 2 at Hay Creek on August 2. Taverner, in his rapid survey in 1920, saw least sandpipers at Bitter Lake on August 8.

Flotten Lake Region. In 1948, noted as follows: July 27(3), 30(1), 31(4); August 1(1), 9(4), 10(1), 11(3), 16(2), 18(6), 20(3), 25(1).

Specimen, National Museum of Canada:

Flotten Lake: 1 juv. unsexed; July 27, 1948

Long-billed Dowitcher. *Limnodromus griseus scolopaceus* (Say)

Cypress Hills Region. Migrant. Bent (1907) listed adults taken at Hay Creek and Bigstick Lake in July as of this race. Taverner in 1920 saw 6 of this species at Bitter Lake, August 8. He did not record it during the following spring and early summer, nor did Young in 1926, nor we in 1948. Some of these observations might apply to the following race *Limnodromus griseus hendersoni*.

Interior Dowitcher. *Limnodromus griseus hendersoni* Rowan

Flotten Lake Region. The only dowitcher observed was a solitary bird at Flotten Lake on August 30, 1948.

Specimen, National Museum of Canada:

Flotten Lake: 1 imm. ♀; Aug. 30, 1948

In this bird, first winter plumage has almost replaced juvenal dress. In measurements (Culmen, 63; wing, 141.5 mm.) it seems referable to *hendersoni*.

Semipalmated Sandpiper. *Ereunetes pusillus* (Linnaeus)

Cypress Hills Region. Migrant. Bent (1907) called it a common migrant. Taverner, on his short visit to Bitter Lake on August 8, 1920, found small sandpipers common, but did not have time to identify most of them. Some probably were of this species. In 1921, he did not record it in May or June, nor did Young in 1926, nor we in 1948. There is a specimen in the National Museum from Crane Lake taken by Spreadborough on April 24, 1894.

Flotten Lake Region. In 1948, noted only on August 6 when 2 were observed by the writer at a small pond near Beaver River.

Specimen, National Museum of Canada:

Crane Lake: 1 ad. ♂; April 24, 1894

Marbled Godwit. *Limosa fedoa* (Linnaeus)

Cypress Lake Region. In 1948, this fine species was locally common and breeding in the vicinity of larger sloughs and lakes on the treeless plains. It was not noted in the upper Cypress Hills. Observed in the following numbers: June 7(60 at Bigstick Lake), 13(2), 15(7, Crane Lake), 16(1), 17(11), 21(5), 23(1), 24(4), 26(30, Maple Creek dam), 28(1), 30(1); July 3(6), 8(11). Bent (1907) recorded the species as very common locally in 1905 and 1906. In 1920 Taverner noted it commonly at Crane Lake on August 11, but in 1921, he found it "not very numerous" at Cypress Lake. Young in 1926 saw 4 on June 12, 4 on June 30, and one on July 8.

[Hudsonian Godwit. *Limosa haemastica* (Linnaeus). *Cypress Hills Region.* Bishop's sight record of a godwit with a white rump at Bigstick Lake on July 21 and 22, 1906, recorded by Bent (1907) probably refers to this species.]

Sanderling. *Crocethia alba* (Pallas)

Cypress Hills Region. Migrant. Bent (1907) found it an abundant migrant in 1905 and 1906. Taverner saw 2 at Crane Lake on August 10, 1920. In 1921, Taverner saw a flock of about 15 at Cypress Lake on May 27.

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂, 1 ad. ♀; May 27, 1921

American Avocet. *Recurvirostra americana* Gmelin

Cypress Hills Region. In 1948, this striking bird was breeding locally and was distributed about ponds and lakes on the plains, as follows: June 7(7, Bigstick Lake), 15(15, Crane Lake), 16(1), 17(1), 24(5), 26(4); July 3(2), 8(3). It was not observed in the Cypress Hills. Bent (1907) recorded it as abundant about all the lakes and alkaline ponds. Taverner in 1920 saw it in unrecorded numbers at Bigstick and Crane Lakes, and in 1921, he noted a few at the west end of Cypress Lake.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 1 ad. ♀; May 27, 1921

Wilson Phalarope. *Steganopus tricolor* Vieillot

Cypress Hills Region. In 1948, a common local summer resident; breeding. Noted at most of the sloughs and lakes of the plains and at Blacker Lake, high in the Cypress Hills, 5 were observed on June 20. The species was noted, as follows: June 7(147, of which about 135 were at Bigstick Lake); 13(35), 15(12), 17(7), 20(5), 24(35), 26(15), 30(10); July 3(18), 7(1), 8(30). Bent (1907) regarded the species as very common in 1905 and 1906 and gave nesting data. In commenting on the reversal of the domestic relations of the sexes, he records frequently seeing 2 females chasing a male. On June 7, 1948, MacDonald, Standfield, and the writer saw a single male being pursued by 5 females at Bigstick Lake!

In 1921, Taverner recorded this species as very common at Cypress Lake and on June 7 collected a set of 4 eggs.

This species was noted by the writer in 1948 north to North Battleford. That it breeds north at least as far as Cochin, about 24 miles north of North Battleford, is attested by 2 sets of eggs taken by F. G. Bard at Cochin on June 3, 1935. The land rises abruptly in this vicinity, however, and the transition from prairie to forest condition is rapid. Farther north in the Flotten Lake region this species was not recorded by us in 1948. However, Fleming (1919) recorded a male taken on Beaver River on May 19, 1914, by Angus Buchanan.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 1 ad. ♀; May 27, 1921

Northern Phalarope. *Lobipes lobatus* (Linnaeus)

Cypress Hills Region. Migrant. Bent (1907) found this species an abundant migrant. Taverner in 1920 saw at least 500 at Bitter Lake on August 9 and about 50 at Bigstick Lake on the following day.

Herring Gull. *Larus argentatus smithsonianus* Coues

Flotten Lake Region. This species was identified with certainty only at Flotten Lake where a single bird was noted on August 19 and 20. Some of the large gulls listed under the following species were observed at distances too great to permit species determination and some of these birds might be referable to the present species.

The status of the herring gull in Saskatchewan requires additional study involving the collecting of specimens. I am informed by F. G. Bard that 2 males were taken by him at Meota, south of our area, on June 17, 1935, and which are in the Saskatchewan Provincial Museum.

Specimen, National Museum of Canada:

Flotten Lake: 1 ad. ♀; Aug. 20, 1948

California Gull. *Larus californicus* Lawrence

Cypress Hills Region. In 1948, this species was not uncommon about larger bodies of water on the plains and occasionally ones and twos were observed at the small lakes in the wooded Cypress Hills. It was observed on June 21(1), 24(15), 26(6), 27(2), 28(3), 29(1), 30(1); July 2(2), 4(1), 7(2), 8(4). Bent (1907) recorded this species as locally common and on June 14, 1906 found a large breeding colony at Bigstick Lake, which since has dried up.

Flotten Lake Region. In 1948, although no definite information on breeding was obtained, this species was often noted at Flotten Lake and at Waterhen Lake, as follows: July 22(10), 27(10), 28(1), 29(1), 30(1), 31(2); August 7(14), 9(14), 10(12), 11(14), 12(16, Waterhen Lake), 16(5), 18(6), 19(2), 20(5), 22(6), 23(7), 24(2), 25(10), 26(7), 27(4), 28(7), 29(2), 30(12), 31(8); September 1(4), 2(2), 3(1), 5(10), 6(4). Due to the difficulties of separating this species in the field, some of the above may refer to *Larus argentatus*.

Specimens, National Museum of Canada:

Flotten Lake: 1 juv. ♀, 2 sub-adults, 1 ad. ♂, 1 ad. ♀, 1 ad. unsexed; Aug. 7 to 23, 1948

Ring-billed Gull. *Larus delawarensis* Ord

Cypress Hills Region. In 1948, this species was fairly common at the lakes and larger bodies of water on the plains. It was identified on June 13(8), 17(1), 24(40, Maple Creek dam), 26(30). Bent (1907) found it common; breeding at Bigstick Lake. Taverner, in 1921, although he scrutinized the large gulls carefully, was able to identify only this species at Cypress Lake where he saw a maximum of 15 in a day.

Flotten Lake Region. In 1948, it was observed on the larger lakes and occasionally along the rivers, as follows: July 22(6), 24(2), 26(12), 27(11), 29(2), 30(4), 31(5); August 4(1), 5(2), 7(7), 9(2), 10(3), 11(2), 18(6), 20(1), 21(4), 22(10), 23(25), 24(3), 25(30), 26(10), 27(4), 28(10), 29(6), 30(5), 31(6); September 1(4), 5(3), 6(2).

Specimens, National Museum of Canada:

Crane Lake: 1 ad. ♀; April 25, 1894

Bitter Lake: 1 ad. ♂, 1 juv. ♀; Aug. 9, 1920

Cypress Lake: 1 ad. ♀, 2 imm. ♀; May 20 to June 7, 1921

Flotten Lake: 1 ad. ♂, 1 ad. ♀, 1 imm. ♀, 3 juv.; July 25 to Aug. 20, 1948

Franklin Gull. *Larus pipixcan* Wagler

Cypress Hills Region. In 1948, except at Many Island Lake where a large colony is located but which is on the Alberta side, this gull was very local and not numerous. It was noted at Bigstick Lake, where 14 were seen on June 7; at Maple Creek dam where, on June 24, 3 were seen and 8 on June 26; and in "The Gap" Cypress Hills, where one was observed on June 30. Bent (1907) found this gull common about all the sloughs and lakes. In 1920 Taverner noted it at Bitter, Bigstick, and Crane Lakes, August 8 to 10, and in 1921, he saw it regularly in small numbers at Cypress Lake.

Flotten Lake Region. In 1948 this species was observed as follows: July 17(6 near Dorintosh), 18(8 flying over brushy fields near Beaver River), 26(3, Jeanette Lake); August 1(1 juv., Flotten Lake), August 21(2, Flotten Lake). Robert P. Allen and R. H. Smith (MS.) saw colonies of this gull at Kazan and Torch Lakes, north of the region, in 1947.

Specimens, National Museum of Canada:

Crane Lake: 1 ad. ♂; June 16, 1894

Flotten Lake: 1 juv. unsexed; Aug. 21, 1948

Bonaparte Gull. *Larus philadelphia* (Ord)

Flotten Lake Region. In 1948, 2 adults were observed over Beaver River on July 23. On August 18 a flock of 20 appeared at Flotten Lake; one was noted at the same place on August 21 and 2 on August 28. F. G. Bard (MS.) took a nest and 3 eggs of this species at Cochin on June 3, 1935. On June 20, of the same year, he collected 2 abandoned nests of this species at Tamoths. Both these localities are south of our area.

Specimens, National Museum of Canada:

Flotten Lake: 3 juv.; Aug. 18 to 21, 1948

Forster Tern. *Sterna forsteri* Nuttall

Cypress Hills Region. In 1948, observed only at Maple Creek dam where 2 were identified on June 24. Bent (1907) recorded it as rare, saw "a few" at Many Island Lake on June 18. He states that 2 specimens were taken by Bishop on July 9. Potter (1943a) observed 5 at Cypress Lake on June 25, 1933.

Common Tern. *Sterna hirundo hirundo* Linnaeus

Cypress Hills Region. In 1948, this tern was noted at most of the larger bodies of water visited on the plains, and it was observed twice at little lakes in the Cypress Hills. It was recorded as follows: June 16(20), 20(2), 21(1), 22(2), 24(150, Maple Creek dam; carrying food apparently to young on an island), 25(2), 26(50), 28(1), 29(1); July 7(4). In 1894, Spreadborough (Macoun, 1900) found it breeding in large numbers at Crane Lake and collected 23 eggs. Bent (1907) recorded it as common but nowhere abundant. Taverner saw it "in limited numbers at Crane Lake on August 11, 1920, and in 1921" almost daily in singles and small flocks of 10 or a dozen at Cypress Lake.

Flotten Lake Region. In 1948, a common local breeder at the larger lakes. At Flotten Lake a colony of approximately 100 birds was found breeding on July 24 on a 2-acre rocky island, the cover of which was raspberry-gooseberry tangles. Many of the young were flying at that date. At least one adult was still incubating eggs. Another colony of about 30 was located on an island at the north end of Jeanette Lake. The species was observed daily at Flotten Lake until September 1, on which date 30 were noted. Robert P. Allen (MS.) noted it at Flotten Lake in 1947, "Nuptial flights observed May 28; 100 or more in colony on island in lake". C. F. Shirley said that this colony has existed for many years.

Specimens, National Museum of Canada:

Crane Lake: 1 ad. ♂; June 7, 1894

Cypress Lake: 1 ad. ♂, 1 ad. ♀; May 21 to 28, 1921

Flotten Lake: 2 ad. ♀; July 24 to Aug. 23, 1948

Black Tern. *Chlidonias nigra surinamensis* (Gmelin)

Cypress Hills Region. In 1948, locally common; breeding; observed about most of the lakes and larger sloughs visited on the plains and also in small numbers on the lakes in the Cypress Hills. Noted as follows: June 7(about 100, Bigstick Lake), 9(2), 10(1), 12(3), 13(20), 14(3),

15(12), 16(12), 17(35), 19(1), 20(6), 21(3), 22(3), 23(2), 25(2), 26(2), 28(2), 29(2), 30(28); July 2(4), 3(20), 7(4), 8(15). Nests were observed at Bigstick Lake and Maple Creek dam. It was found to be locally common also by Bent (1907), by Taverner in 1920 and 1921, and by Young in 1926.

Flotten Lake Region. Very common on lakes and sluggish streams throughout the region. In 1948, it was observed on July 19(40), 22(5), 23(8), 24(9), 26(9), 27(30), 28(20), 29(10), 30(105), 31(5); August 2(11), 3(120), 4(18), 5(2), 6(161), 7(20), 9(12), 10(5), 11(16), 12(50), 13(37), 14(8), 16(3), 18(3), 22(4), 24(10), 31(3).

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂; June 7, 1921

Cypress Hills: 2 ad. ♂; June 30, 1948

Flotten Lake: 1 juv. ♂; Aug. 23, 1948

Western Mourning Dove. *Zenaidura macroura marginella* (Woodhouse)

Cypress Hills Region. In 1948 this species was common and breeding throughout the wooded Cypress Hills and on the plains where trees occur, such as in coulées or tree plantations. Noted as follows: June 3(7), 4(5), 5(8), 6(3), 7(4), 8(9), 9(1), 10(5), 12(2), 13(2), 14(3), 15(6), 16(3), 17(2), 18(1), 19(5), 20(4), 22(4), 23(2), 24(10), 26(6), 28(1), 29(2); July 2(6), 3(3), 5(5), 6(2), 7(3), 8(1), 12(3), 13(7). A nest on the ground in lodgepole pine forest on June 5 contained 2 just-hatched young.

Bent (1907) found this species very common and breeding in the timber along the creeks. In 1921 Taverner and Laing saw "a few almost daily" at both Cypress Lake and Eastend.

Flotten Lake Region. This species was not observed north of Dorintosh where on July 18, 1948, a single specimen was noted. On July 30, 4 were seen beside Meadow River near Meadow Lake and on August 13, 2 were noted 3 miles west of Meadow Lake.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♀; May 24, 1921

Eastend: 1 ad. ♂, 1 ad. ♀; June 17 to 21, 1921

Cypress Hills: 1 ad. ♂, 1 juv.; June 5 to 22, 1948

Maple Creek: 1 ad. ♂; July 12, 1948

Black-billed Cuckoo. *Coccyzus erythrophthalmus* (Wilson)

Cypress Hills Region. In 1948, an uncommon summer resident, probably breeding, but noted only once; an adult female with a brood patch taken on June 19 in sparse willows bordering a creek about 15 miles southwest of Maple Creek. Bent(1908) recorded a black-billed cuckoo as seen in the Skull Creek timber on June 9, 1905, by a Mr. Day. In 1921, Taverner and Laing did not see this species, but at Eastend Laing heard it on June 24, 26, 27, and 28. Potter (1926 and 1943a) believed that this cuckoo fluctuates numerically near Eastend. He saw this species there first in 1912. He said that in 1923 this cuckoo was "almost abundant" there and he saw a female with an egg in the oviduct. Again in 1940 he found it numerous.

Although not observed in the Flotten Lake region, the writer has examined a retrix of this species submitted for identification from Marshall, east of Lloydminster, on May 6, 1947. Farther east at Emma Lake, Mowat (1947) observed 2 specimens in June and July, 1939.

Specimens, National Museum of Canada:

Maple Creek (15 miles southwest): 1 ad. ♀; June 19, 1948

Screech Owl. *Otus asio* subsp.

Cypress Hills Region. Mitchell (1924) and Potter (1943a) recorded an owl seen by Potter "almost at arm's length" near Eastend in the winter of 1903-4. Potter noted the ear tufts distinctly.

Arctic Horned Owl. *Bubo virginianus wapacuthu* (Gmelin)

Cypress Hills Region. In 1948 this species was noted in the wooded Cypress Hills, and once in a wooded coulée on the plains, as follows: June 4(1), 18(1), 21(1), 23(1); July 5(1), 13(1). A juvenal, not long capable of flight, was taken in the balsam poplar woodlands of upper Fairwell Creek on July 13. Bent (1908) found this owl breeding in 1905 and 1906. Taverner, in 1921, found a pair of this owl accompanied by young in a coulée near Cypress Lake on June 3, and another was taken by him in the valley of Frenchman River near Eastend on June 21.

Flotten Lake Region. In 1948, observed in the forest about Flotten Lake as follows: July 22(1), 24(1), 27(1), 31(1); August 5(1), 14(1), 15(1), 16(1), 19(1), 21(1), 26(1), 27(1), 28(1), 29(2); September 1(1). Said by trappers to be commoner in winter.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 1 ad. ♀, 1 juv. ♂; June 3, 1921

Eastend: 1 ad. ♂; June 21, 1921

Maple Creek: 1 ad. ♀; July 5, 1948

Cypress Hills (Fairwell Creek): July 13, 1948

Flotten Lake: 1 ad. ♀; July 31, 1948

Bent (1908) commented on the light coloration of his specimens and mentioned that the legs were faintly barred with dusky. Our specimens from the Cypress Hills region also are very pale, being considerably paler even than the Flotten Lake specimen. The feet of 2 adults are almost immaculate and in general coloration they do not appear to differ from an excellent series of *wapacuthu*, averaging, if anything, even paler. There appears to be no alternative to referring them to *wapacuthu*.

Snowy Owl. *Nyctea scandiaca* (Linnaeus)

Flotten Lake Region. According to C. F. Shirley this is an irregular winter visitor.

Western Burrowing Owl. *Speotyto cunicularia hypugaea* (Bonaparte)

Cypress Hills Region. In 1948, this was an uncommon species; breeding; observed only on the short-grass plains. On June 16, one was observed north of Maple Creek dam, and on June 24, 2 adults were noted at the same

place and a juvenal was seen briefly near the mouth of a burrow; on June 19, an adult was noted 1 mile south of Downey Lake, and on July 8, 2 adults were recorded 4 miles east of Robsart.

Macoun (1903) records that Spreadborough took a specimen at Crane Lake in May 1894. Bent (1908) recorded 3 pairs, of which 2 nests were located in 1905 and 1906. The species was not recorded by Taverner in 1921, or by Young in 1926.

The breeding of this owl north to Livelong and Nipawin have been recorded recently by Shaw (1944) and Street (1943), respectively.

Specimen, National Museum of Canada:

Robsart (4 miles east): 1 ad. unsexed; July 8, 1948

Western Long-eared Owl. *Asio otus tuftsi* Godfrey

Cypress Hills Region. Bent (1908) recorded only a pair, which were nesting on Bear Creek on June 2, 1905. Taverner and Laing in 1921 found this owl breeding in wooded coulees at both Cypress Lake and Eastend. However, Young in 1926 and our party in 1948 did not observe the species.

Specimen, National Museum of Canada:

Cypress Lake: 1 ad. ♂; May 30, 1921

One additional specimen of *tuftsi* has been examined by the writer since the description (Godfrey, 1947) of this well-marked race. This specimen, in the collection of Hoyes Lloyd, is a male in fresh plumage taken at Glenada, Saskatchewan, on September 11, 1922. In its pale coloration it is distinguishable at a glance from the several specimens from eastern Canada in the Lloyd collection. Todd's remarks (1947), written before *tuftsi* was described, on the paleness of a single specimen in the Carnegie Museum from Last Mountain Lake, the type locality of *tuftsi*, illustrate the characters of this race. Characters of *tuftsi* are best developed in populations breeding on the western plains, and I have seen no overlapping of characters of *tuftsi* from these areas with those of *wilsonianus* from the forested East. Birds breeding in localities west of the plains are in colour somewhat intermediate between *tuftsi* and *wilsonianus*, but seem to average closer to *tuftsi*.

Short-eared Owl. *Asio flammeus flammeus* (Pontoppidan)

Cypress Hills Region. In 1948, this owl was seen only once, a single bird 3 miles southwest of Crane Lake. Macoun (1903) states that Spreadborough observed it at Crane Lake in 1894. Bent (1908) also noted it at Crane Lake in 1905, and although he found it uncommon a nest was noted in June, 1905.

Saw-whet Owl. *Aegolius acadicus acadicus* (Gmelin)

Cypress Hills Region. Mitchell's 1924 statement that this owl breeds in the Cypress Hills and Mann's (Blue Jay, 1946, vol. 4, p. 21) report of one at Skull Creek on January 1, 1946, are the only information on the occurrence of this species in the region of which the writer is aware.

[Whip-poor-will. *Caprimulgus vociferus* Wilson. *Cypress Hills Region.* Two sight records by Potter (1943a) are hardly conclusive and it seems best to place this species on the hypothetical list of the Cypress Hills region.]

Nuttall Poor-will. *Phalaenoptilus nuttallii nuttallii* (Audubon)

Cypress Hills Region. Potter (1943a) states that he heard a poor-will for 2 or 3 nights in June 1905, at Eastend. There appears to be little reason to doubt the correctness of this identification in view of the distinctive call, and of the fact that a specimen of the species was collected and another heard on the Alberta side of the Cypress Hills (Rand, 1948).

Eastern Nighthawk. *Chordeiles minor minor* (Forster)

Flotten Lake Region. A common summer resident; breeding. In 1948, it was observed as follows: July 22(4), 23(15), 24(10), 26(3), 27(10), 28(4), 29(2), 30(5), 31(2); August 2(5), 3(5), 4(4), 5(1), 6(20), 7(14), 9(7), 10(49), 11(2), 12(7), 13(10), 16(2), 18(8), 23(6), 26(4), 31(1).

Robert P. Allen saw young of this species in late June 1947, at Flotten Lake.

Specimens, National Museum of Canada:

Flotten Lake: 4 ad. ♂, 1 ad. ♀, 1 juv.; July 24 to 28, 1948

Jeanette Lake: 1 ad. ♀; Aug. 2, 1948

Sennett Nighthawk. *Chordeiles minor sennetti* Coues

Cypress Hills Region. In 1948, this bird was fairly common throughout the Cypress Hills, and on the plains and badlands country. It was observed on June 3(2), 4(2), 5(2), 6(2), 7(1), 8(11), 9(1), 10(2), 11(1), 12(2), 13(4), 14(2), 15(2), 16(2), 17(1), 18(8), 19(1), 20(3), 21(1), 22(3), 23(1), 24(2), 25(1), 26(1), 28(3), 29(1), 30(2); July 2(2), 3(3), 5(2), 6(2), 7(2), 8(4), 12(8), 13(11). Bent (1908) recorded it as common and breeding, as also did Taverner in 1921, at Cypress Lake and Eastend.

Specimens, National Museum of Canada:

Eastend: 1 ad. ♂; June 21, 1921

Cypress Hills: 1 ad. ♂; July 13, 1948

These specimens, and another found dead in the Cypress Hills and examined in the field but which was too decomposed to be preserved, are very pale and are referred to *sennetti* rather than to *hesperis*, as has been done by others. Of interest in this connection is Todd's (1947) identification of specimens from Imperial, Elbow, Devil's Lake, and Davidson (12 miles southwest), also as *sennetti*.

Ruby-throated Hummingbird. *Archilochus colubris* (Linnaeus)

Cypress Hills Region. Potter (1930) recorded a hummingbird found in an exhausted condition near Eastend in August 1925. It was identified at Saskatchewan Provincial Museum as of this species. There are a few other reported sight records of hummingbirds in the literature, but whether they refer to this or to the following species is not clear.

Flotten Lake Region. In 1948, not uncommon throughout the region; breeding. On July 26 one was noted at Flotten Lake and on an island in Flotten Lake 3 were seen feeding at fresh sapsucker drillings in the bark of a white birch and another was noted there on the same date—4 in all. On August 5, 4 were noted flying among the tops of 30-foot birches on the

same island, and one at the same place on August 7. On August 9, on the same island in Flotten Lake, Standfield, MacDonald, and the writer watched a female feeding and brooding young in a nest located 25 feet up in a slender white birch in mixed spruce-birch forest. Single birds were observed at Flotten Lake again on August 11 and 16. At Meadow Lake one was noted on August 13. C. F. Shirley has observed the species regularly in summer at his home at Dorintosh. Dexter (1922) says that this species is occasionally seen in July along Beaver River as far north as Ile-à-la-Crosse.

Specimen, National Museum of Canada:

Flotten Lake: 1 ad. ♀; July 29, 1948

Rufous Hummingbird. *Selasphorus rufus* (Gmelin)

Cypress Hills Region. Potter (1936) recorded specimens picked up dead as follows: One at Eastend, August 11, 1929, which was forwarded to the Saskatchewan Provincial Museum and was identified there; one taken at Eastend, August 18, 1932, said to be in the Museum at Shaunavon; and one found dead by C. F. Holmes near Shaunavon on July 31, 1933. These are all late July and early August records, and all were found dead.

Calliope Hummingbird. *Stellula calliope* (Gould)

Cypress Hills Region. A specimen is recorded by Potter (1936 and 1943b) as taken at Shaunavon on August 22, 1935, by Charles Guiguet. This specimen was forwarded for identification to the National Museum of Canada and was identified as *Stellula calliope* by Taverner.

Eastern Belted Kingfisher. *Megaceryle alcyon alcyon* (Linnaeus)

Cypress Hills Region. In 1948, this species was not uncommon along the streams and lakes of the wooded parts of the upper Cypress Hills. It was observed on June 5(1), 6(1), 8(1), 10(1), 14(3), 18(1), 19(1), 24(3); July 2(1), 12(5). A juvenal male was taken at Fairwell Creek on July 13, the plumage development of which suggests that it was not long out of the nest.

Bent (1908) states that one was noted by Bishop at Maple Creek on June 16 and July 4, 1906. Taverner and Laing in 1921 saw a single specimen in the Eastend area on June 24 and 29.

Flotten Lake Region. In 1948, not uncommon in the vicinity of streams and lakes throughout the region. Observed on July 19(2), 24(1), 26(1), 27(4), 30(1); August 2(2), 3(1), 4(1), 5(2), 7(1), 9(1), 10(2), 11(2), 12(2), 13(1), 14(1), 16(1), 18(1), 20(1), 22(1), 23(2), 25(1), 26(1), 27(2), 29(2), 30(4), 31(4); September 1(4), 2(1), 3(1), 4(1), 5(1), 6(1).

Specimens, National Museum of Canada:

Cypress Hills: 1 juv. ♂; July 13, 1948

Flotten Lake: 1 juv. ♀; Aug. 20, 1948

Wing of the Flotten Lake bird measures 161 mm; primaries of the Cypress Hills specimen not fully developed (wing 140 mm.).

Hybrid Flicker. *Colaptes cafer* x *auratus*

Cypress Hills Region. In 1948, common throughout the wooded Cypress Hills, and noted also in the trees along coulées and plantations on the plains. Noted on June 3(3), 4(3), 5(3), 6(2), 7(3), 8(8), 9(3), 10(7), 11(4), 12(8), 13(3), 14(2), 15(3), 16(4), 17(2), 18(1), 19(10), 22(6), 24(18), 25(4), 26(9), 28(1), 29(3), 30(3); July 2(9), 5(12), 6(2), 7(6), 12(10), 13(26). Several nests containing young were noted between June 8 and July 2.

Bent (1908) found this hybrid population common in heavy timber along the creeks and noted it also in the Cypress Hills. Taverner in 1921 found flickers "not very common at either Cypress Lake or at Eastend". Young in 1926 recorded as many as 15 on several dates.

Flotten Lake Region. An adult male taken at Flotten Lake on September 3, 1948, has orange-yellow wing linings and traces of red in the moustache.

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂; June 2 and 3, 1921
 Shaunavon: 3 ad. ♂, 1 ad. ♀, 3 juv. ♀, 6 juv. ♂; June 15 to 23, 1933 and 1934
 Eastend: 1 ad. ♂; June 16, 1921
 Maple Creek: 6 ♂, 5 ♀, 1 unsexed; June 8 to July 12, 1948
 Battle Creek: 1 juv. unsexed; Aug. 16, 1927
 Cypress Hills: 2 ♂, 3 ♀, 1 unsexed; June 28 to July 13, 1948
 Flotten Lake: 1 ad. ♂; Sept. 3, 1948

Bent (1908) finds one bird in those collected by him that he regards as pure *auratus*. Of the 21 specimens listed above, all show some evidence of being hybrids.

Boreal Flicker. *Colaptes auratus borealis* Ridgway

Flotten Lake Region. In 1948, a common summer resident throughout the region. Observed on July 19(4), 22(8), 23(4), 24(3), 26(8), 27(11), 28(6), 29(5), 30(8), 31(5); August 2(8), 3(3), 4(4), 5(2), 6(4), 7(2), 9(4), 10(4), 11(4), 12(9), 13(4), 14(4), 16(10), 18(2), 19(1), 20(5), 22(1), 23(3), 24(2), 25(2), 26(2), 27(5), 28(8), 29(6), 30(12), 31(9); September 1(6), 2(38), 3(34), 4(11), 6(12).

Specimens, National Museum of Canada:

Flotten Lake: 4 ad. ♂, 2 ad. ♀, 5 juv.; July 27 to Sept. 3, 1948

Flotten Lake is within the breeding range of *borealis* as outlined by Ridgway (1914) and by Wetmore (1939). July and August specimens, listed above subspecifically, are unidentifiable. However, 5 males and 2 females in fresh adult plumage (September 2 and 3) have wing measurements (in mm.) of: males, 156, 158, 160, 161, and 163; females, 157 and 157.5. They average small for *borealis*, but are probably nearer that race than to *luteus*. Some or all of these September birds may be migrants.

Northern Pileated Woodpecker. *Hylatomus pileatus abieticola* (Bangs)

Flotten Lake Region. In 1948, an uncommon resident of the forests; probably breeding. One was observed by MacDonald on July 20 near Dorintosh, and on August 14 the writer heard one unmistakably during

a heavy thunder storm $1\frac{1}{2}$ miles east of Flotten Lake. The 'work' of this woodpecker was several times observed within a 5-mile radius of Flotten Lake. One was noted by MacDonald on August 29 and 30 near Flotten Lake.

Western Red-headed Woodpecker. *Melanerpes erythrocephalus caurinus* Brodkorb

Cypress Hills Region. In 1948 our only observation was of an adult noted by the writer in the Cypress Hills on June 25. Macoun (1903) recorded a pair found breeding at the east end of the Cypress Hills in June 1894, and that another was seen at Crane Lake. Bent (1908) states that one was seen in the Skull Creek timber on June 9, 1905, and that Dwight collected one in the Bigstick timber on July 19, 1906. Mitchell (1924 and 1925) recorded a specimen taken by L. B. Potter near Eastend on April 30, 1920, and another taken at the same place on June 22, 1924. Taverner in 1921 saw one in a coulée on the north side of Cypress Lake on June 5, and one was taken by Laing at Cypress Lake on June 11, 1921.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂; June 11, 1921

This specimen (wing 148 mm.) is clearly referable to *caurinus*.

Lewis Woodpecker. *Asyndesmus lewis* (Gray)

Cypress Hills Region. Potter (1943a) calls this species "an uncommon straggler from the West". He observed it in the vicinity of Eastend on September 19, 1915, and says that there are several other September records. He records also spring observations (May 12, 1938, and May 26, 1939), and adds that there are reports of others having been seen about the same time.

Yellow-bellied Sapsucker. *Sphyrapicus varius varius* (Linnaeus)

Flotten Lake Region. Not uncommon summer resident, particularly in the mixed forests throughout the region. Observed on July 18(1), 19(2), 23(1), 26(2), 28(2), 29(9), 31(2); August 2(1), 3(1), 4(1), 6(1), 10(8), 12(4), 14(3), 19(2), 20(1), 23(1), 26(1), 28(1); September 1(1), 2(8), 3(2), 4(1), 6(1).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 3 juv.; July 26 to Aug. 19, 1948

Northern Hairy Woodpecker. *Dendrocopos villosus septentrionalis* (Nuttall)

Cypress Hills Region. In 1948, we found this woodpecker not uncommon in the larger timber of the higher parts of the Cypress Hills where it was recorded on June 4(1), 5(4), 6(1), 8(3), 9(1), 14(1), 17(1), 18(2), 20(1), 22(4), 23(1), 26(1), 28(3), 29(1), 30(1); July 2(1), 7(1), 12(1), 13(4). This species was not recorded by Bent (1908) or by Taverner and Laing in 1921. However, Young in 1926, saw one on June 7, and Mitchell (1924) stated that it breeds in the Cypress Hills.

Flotten Lake Region. Not uncommon in forests throughout the region where in 1948 we noted it on July 19(3), 23(2), 26(1), 30(1); August 3(1), 10(1), 12(2), 13(1), 14(3), 21(1), 30(1).

Specimens, National Museum of Canada:

Cypress Hills: 2 ♂, 2 ♀; June 8 to July 10, 1948
Flotten Lake: 1 ♂, 1 ♀; Aug. 14, 1948

Wing measurements (in mm.) of above specimens are: From Cypress Hills: 2 males, 129, 130; 2 females, 128, 129. From Flotten Lake, 1 male, 130; 1 female, 133.

Nelson Downy Woodpecker. *Dendrocopos pubescens nelsoni* (Oberholser)

Cypress Hills Region. Apparently a rather rare resident of the wooded Cypress Hills. In 1948 it was observed only on June 4, 5, and 25, a single bird in each case. On two other occasions woodpecker drumming was attributed to this species. Bent (1908), Taverner, and Young did not observe it. Potter (1925) said that it is rare in the Eastend region. Mitchell (1924) says that it has been found breeding in the region, but does not give its numerical status.

Flotten Lake Region. Occurs throughout the region. In 1948, we noted it on July 26(1), 27(2), 30(1); August 2(1), 6(1), 9(2), 12(2), 14(1), 16(1), 19(1), 25(1), 30(1); September 1(1).

Specimens, National Museum of Canada:

Flotten Lake: 1 ♂, 4 ♀, 1 unsexed; July 26 to Aug. 12, 1948

Of the 6 specimens listed above only 5 are useful for taxonomic purposes. Wing measurements of 4 females are (in mm.) respectively: 95, 98.5, 96.5, and 96.5; and of one male, 96.5. Thus they are intermediate in size between *medianus* and *nelsoni*, if anything near the former. However, in the reduction of black on the lateral rectrices (bars averaging fewer and narrower than in birds from eastern Canada) they are nearer *nelsoni*. We have a single specimen from Cypress Hills, taken on the Alberta side on July 5, 1945, which has a wing measurement of 102 mm., and with the barring on lateral rectrices reduced to mere dots, perfectly typical of *nelsoni*. However, Rand (1948) has quite properly pointed out by wing measurements and tail-bar counts that there is a great amount of overlapping of these characters in birds from the Prairie Provinces. He referred Alberta specimens from Wood Buffalo Park south to, tentatively, *medianus*, but it is not clear whether or not he would synonymize *nelsoni* with *medianus*. If we retain *nelsoni*, the present writer would refer Flotten Lake birds on average characters to *nelsoni*, with reservation that most of them are by no means typical.

Arctic Three-toed Woodpecker. *Picoides arcticus* (Swainson)

Cypress Hills Region. An adult male taken by MacDonald on June 5, 1948, as it fed high in a dead tree in lodgepole pine forest in the Cypress Hills, is our only record. This species has not previously been reported from the region nor from the Alberta side of the Cypress Hills.

Flotten Lake Region. In 1948, this was an uncommon species noted only in jack pine forest at Flotten and Jeanette Lakes. It was observed on July 29(1); August 2(3), 27(1), 29(1), 30(2).

Specimens, National Museum of Canada:

Cypress Hills: 1 ad. ♂; June 5, 1948

Flotten Lake: 2 ♂, 3 ♀; July 29 to Aug. 30, 1948

Alaska Three-toed Woodpecker. *Picoides tridactylus fasciatus* Baird

Flotten Lake Region. Uncommon. Single birds were observed in jack-pine forest on August 2 at Jeanette Lake, and on August 30 and September 6 near Flotten Lake.

Specimens, National Museum of Canada:

Jeanette Lake: 1 ♂; Aug. 2, 1948

Flotten Lake: 1 ♀, 1 unsexed; Aug. 30 to Sept. 6, 1948

Apparently only 2 specimens have previously been taken in Saskatchewan (Mowat, 1947) and no report on their subspecific status has appeared. One of the specimens listed above is clearly referable to *fasciatus*, the other two incline slightly toward *bacatus* but are nearer *fasciatus*. Fleming (1919) referred a specimen from Fort Du Brochet, on the Manitoba side of the Saskatchewan-Manitoba border, to *fasciatus*. However, specimens from Ilford, farther east in Manitoba, on the Hudson Bay Railway, and from Bird, Cormorant Lake, and Churchill, in the National Museum, seem referable to *bacatus*.

Western Kingbird. *Tyrannus tyrannus hespericola* Oberholser

Cypress Hills Region. In 1948, this species was widely dispersed over the plains although commoner where irrigation or settlement provides trees. Its adaptability is illustrated by a nest containing 5 eggs located on July 8, 1948, on a narrow ledge over the door of one of the buildings of a deserted ranch building 6 miles or so south of Eastend—apparently an unusual location. In the wooded upper Cypress Hills this kingbird was noted only a few times, near forest edges. On the plains and lower Cypress Hills it was observed as follows: June 3(7), 4(6), 5(1), 7(10), 8(8), 9(1), 10(5), 13(8), 15(10), 16(14), 17(19), 19(14), 21(10), 24(15), 26(12), 28(5); July 2(5), 3(6), 5(3), 7(3), 8(12), 12(12), 13(1). Bent (1908) found this species common. Taverner in 1921 found it only occasionally on the south side of Cypress Lake, but it was common on the north side and near Eastend.

Flotten Lake Region. In 1948, we found this species most common from Otter Creek south where there were more open fields, although as many as 5 were noted in a day (July 22) at Flotten Lake, and on August 2, 2 were seen at Jeanette Lake where they frequented lake or stream edges or open muskegs. Observed in the region on July 19(8), 22(5), 23(12), 30(12); August 2(2), 3(12), 5(1), 6(14), 9(2), 11(3), 12(7), 13(7), 16(3), 21(6), 30(2); September 3(1).

Specimens, National Museum of Canada:

Maple Creek (8 miles north): 1 ad. ♀; June 16, 1948

Flotten Lake: 1 ad. ♂; Aug. 5, 1948

This western race was described by Oberholser (1932). In our material, birds from Manitoba and west average slightly paler dorsally and ventrally than those from Ontario and east. There is some overlapping, however, and the differences are considered by some to be too slight and inconstant to justify recognition. However, in unworn plumages the differences are discernible in about 75 per cent of the unworn specimens in the National Museum of Canada.

Arkansas Kingbird. *Tyrannus verticalis* Say

Cypress Hills Region. In 1948, this species was not uncommon locally on the plains along tree-bordered coulees or in tree plantations. Even in the driest parts of the region a nest was located in a few sparse, isolated trees (*Populus balsamifera*) beside a long deserted ranch house near Highway 48, about 2 miles north of the Montana border. It was not found in the upper Cypress Hills. Noted as follows: June 2(7), 3(2), 4(3), 8(5), 10(3), 13(1), 15(2), 16(8), 17(1), 19(10), 21(4), 24(5), 26(6), 28(7); July 2(3), 3(3), 5(2), 8(1), 12(3). Bent (1908) recorded it not quite so common as the preceding species, in 1905 and 1906. Taverner in 1920 saw one between Bigstick and Crane Lakes on August 10, and in 1921 he recorded 2 on May 19 and another on June 22.

Specimens, National Museum of Canada:

Maple Creek (8 miles north): 1 ad. ♂, 2 ad. ♀; June 16, 1948

[Crested Flycatcher. *Myiarchus crinitus* (Linnaeus). Potter (1943a) recorded a sight observation of this species, presumably near Eastend. Few details are given, however, except that the bird was shy and kept moving along the tree tops.]

Eastern Phoebe. *Sayornis phoebe* (Latham)

Flotten Lake Region. In 1948, it was occasionally seen in alders and willows along the streams. A nest with young was located under the bridge over Waterhen River on July 20, and on August 3 a family group was observed 8 miles west of this at a deserted saw-mill on the same river. Near Meadow Lake a nest on July 19 on a shed contained 3 small young; 2 of these were still in the nest on July 30. Only one bird was observed at Flotten Lake, a solitary example on August 20, our latest observation.

Farther south at Cochin, F. G. Bard collected a nest and 4 eggs on June 14, 1935, and a nest with one egg of this phoebe and one of the cowbird on June 15, 1935, at Iffley.

Specimens, National Museum of Canada:

Dorintosh (8 miles north): 1 juv. ♀; Aug. 12, 1948

Flotten Lake: 1 juv. unsexed; Aug. 20, 1948

Say Phoebe. *Sayornis saya saya* (Bonaparte)

Cypress Hills Region. In 1948 this species was uncommon and was observed as follows: On June 19, a pair were nesting under a culvert 3 miles south of Downey Lake; on June 21 a pair nesting under the seat of an abandoned cable car formerly used for crossing a small creek, 3 miles north of the Willow Creek; and on July 3 a pair was found nesting in a culvert in the badlands country near Ravenscrag.

Bent (1908) also found it uncommon. Taverner and Laing in 1921 saw it occasionally near Cypress Lake and Eastend, finding a nest in both these areas. Macoun (1903) recorded 2 nests at Crane Lake in June 1894.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♀; June 10, 1921
Downey Lake (3 miles south): 1 ad. ♀; June 19, 1948
Robsart (5 miles south): July 8, 1948

These specimens are paler than specimens of *yukonensis* from Chitina River, Alaska, and Lapie River, Yukon. Their measurements are: 1 male, wing, 106; tail, 83.5; culmen, 14.2 mm.; 2 females, wing, 105, 97; tail, 81, 77; culmen 13.5, 13 mm.

Yellow-bellied Flycatcher. *Empidonax flaviventris* (Baird and Baird)

Flotten Lake Region. In 1948, this species was observed a few times, mostly in alders along small streams and once in a stand of open, immature jack pines. Noted on August 2(3), 4(2), 7(3), 10(2), 11(1), 16(1). This species probably is commoner in the wooded parts of central Saskatchewan than the few records indicate.

Specimens, National Museum of Canada:

Flotten Lake: 1 juv. unsexed; Aug. 10, 1948
Jeanette Lake: 1 juv. ♂; Aug. 2, 1948

These specimens and a good series from Alberta do not appear to differ from specimens from Ontario and eastward.

Alder Flycatcher. *Empidonax trailii trailii* (Audubon)

Cypress Hills Region. Bent (1908) did not personally observe this species but stated that Bishop collected one in the Cypress Hills on July 27, 1906. Taverner in 1921 secured specimens from Cypress Lake as listed below in late May and early June. In 1948, we did not find it in the higher parts of the Cypress Hills, but one was heard by the writer in willows at the east end of Cypress Lake on June 13.

Flotten Lake Region. Common in alder and willow thickets throughout the region. It was noted on July 18(3), 19(4), 22(1), 23(3), 24(6), 26(2), 27(2), 28(5), 29(2), 31(3); August 3(10), 4(4), 5(3), 7(3), 9(1), 10(3), 11(4), 12(6), 13(1), 16(9), 20(2), 25(1), 28(1); September 1(1). It apparently is common south at least to North Battleford where the writer noted 3 on the evening of July 16, 1948.

Specimens, National Museum of Canada:

Cypress Lake: 3 ad. ♂, 2 ad. ♀; May 31 to June 3, 1921
Flotten Lake: 1 ad. ♂, 2 ad. ♀, 3 juv.; July 24 to Aug. 28, 1948

Least Flycatcher. *Empidonax minimus* (Baird and Baird)

Cypress Hills Region. Bent (1908) found this species "very common in the timber on Maple and Skull Creeks". Taverner and Laing in 1921 collected 5 at Cypress Lake as listed below. In 1948, we did not record it in the higher parts of the Cypress Hills where *wrightii* was common.

Flotten Lake Region. Fairly common in more open woodland throughout the region; breeding. Observed on July 19(11), 23(2 adults feeding 3 young), 24(3), 26(3), 27(4), 28(2), 29(2), 31(2); August 2(2), 3(1), 7(1), 10(2), 11(4), 12(3), 16(4).

Fleming (1919) recorded a female taken at Lake Ile-à-la-Crosse on May 29, 1914, north of the region. South of the region at North Battleford, the writer saw 2 least flycatchers on the evening of July 16, 1948.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 4 ad. ♀; May 31 to June 10, 1921

Flotten Lake: 1 ad. ♂, 1 ad. ♀, 2 juv.; July 23 to Aug. 16, 1948

Matheson Lake: 1 ad. ♀, 1 juv. ♂; Aug. 3 to 13, 1948

Wright Flycatcher. *Empidonax wrightii* Baird

Cypress Hills Region. In 1948, we found this the common *Empidonax* of the higher parts of Cypress Hills. It was noted in pure stands of aspen or willow, or frequently where these were mixed with coniferous woods. Its call, so different from that of *minimus* or *trillii*, was given from a variety of situations, not infrequently from the top of a good-sized lodgepole pine or a 35-foot white spruce. It was not seen on the lower slopes or along the coulées at the base of the Cypress Hills. It was noted as follows: June 5(3), 6(1), 8(2), 11(3), 12(3), 14(3), 18(4), 22(8), 28(3), 29(3); July 2(2), 5(3), 7(4), 10(3).

Bent (1908) says that Bishop found it common with half-fledged young, in the Cypress Hills, from July 25 to 30, 1906. Mitchell (1924) recorded it as breeding on the north slopes of the Cypress Hills and also that specimens were taken by P. A. Taverner at Cypress Lake, May 31 and June 2, 1921. The Cypress Lake records are erroneous, however. These particular specimens have been examined by the writer and are unquestionably *minimus*.

Specimens, National Museum of Canada:

Cypress Hills region: 13 ad. ♂, 2 ad. ♀; June 4 to July 7, 1948

Measurements (in mm.) of 12 males are: Wing, 67·8-72·5 (av. 69·9), tail, 58·5-68 (av. 62·5), exposed culmen, 11·2-12·5 (12·1).

Western Wood Pewee. *Contopus richardsonii richardsonii* (Swainson)

Cypress Hills Region. Bent (1908) states that Bishop took a specimen in the Cypress Hills on July 27, 1906. Taverner and Laing, in 1921, saw and collected 2 specimens, thought to be a pair, on June 10, at Cypress Lake.

Flotten Lake Region. Common summer resident throughout the region. In 1948 it was noted, as follows: July 19(2), 23(3), 24(6), 26(3), 27(2), 29(4), 30(1); August 2(14), 3(25), 4(1), 5(2), 6(3), 7(2), 9(3), 12(3), 16(2), 23(4).

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 1 ad. ♀; June 10, 1921

Flotten Lake: 2 ad. ♂, 3 ad. ♀, 1 juv. ♂; July 24 to Aug. 12, 1948

Jeanette Lake: 1 ad. ♂, 3 ad. ♀; Aug. 2, 1948

Olive-sided Flycatcher. *Nuttallornis borealis* (Swainson)

Cypress Hills Region. Migrant. Bent (1908) records 2 specimens taken at Maple Creek on June 8, 1906.

Flotten Lake Region. In 1948, this flycatcher was noted usually in old burnt land or muskegs from Meadow Lake to Flotten Lake, as follows: July 26(2), 27(2), 29(4); August 2(6), 3(4), 10(1), 16(1), 23(2), 27(1).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 1 ad. ♀; July 26 and 27, 1948

Jeanette Lake: 1 ad. ♂; Aug. 2, 1948

Matheson Lake: 1 ad. ♂; Aug. 3, 1948

Wing measurements of these specimens are: 3 ♂, 105·5, 105, 106·5; 1 ♀, 106 mm., respectively.

Hoyt Horned Lark. *Eremophila alpestris hoyti* (Bishop)

Flotten Lake Region. In 1948, no horned larks were observed in the region until September 2 when 2 appeared at Flotten Lake. Two were noted on the following day and 8 on September 6. They probably were migrants.

Specimen, National Museum of Canada:

Flotten Lake: 1 ad. ♂; Sept. 2, 1948

In size (wing, 111·5 mm.; tail, 70·0; tarsus, 24; exposed culmen, 11) and coloration this specimen is referable to *hoyti*.

Desert Horned Lark. *Eremophila alpestris leucolaema* Coues

Cypress Hills Region. Common and breeding on the plains; scarcer about treeless areas in the higher parts of the Cypress Hills; commonest on the plains south of Cypress Hills. The species was noted on June 3(6), 4(6), 7(25), 8(4), 10(1), 11(1), 13(10), 15(20), 16(8), 17(20), 19(5), 21(210; a nest on this date contained 3 eggs), 23(2), 24(12), 26(8), 28(5), 30(8); July 2(3), 3(55), 5(4), 7(1), 8(estimated 350), 13(8).

Specimens, National Museum of Canada:

Cypress Lake: 4 ad. ♂, 1 ad. ♀; May 21 to June 1, 1921

Robsart (5 miles west): 4 ad. ♂, 2 ad. ♀; June 17, 1948

Govenlock (13 miles south): 1 ad. ♂; June 21, 1948

Bent (1908) found specimens from the eastern part of this region to be nearer *E. a. enthymia* (Oberholser) whereas "those taken on the alkaline, sage-brush plains of western Saskatchewan and in Alberta were more typical of *leucolaema*".

All our 1948 specimens are from the arid plains south of Cypress Hills and the 1921 birds were taken also on the south side of the lower Cypress Hills at Cypress Lake. I am unable to separate them from specimens from southeastern Alberta referred to *leucolaema* by Oberholser (1902) and by Rand (1948).

A series of 3 females and 2 males from Davidson and Last Mountain Lake, Saskatchewan (April to July) was examined. They perhaps average, in series, very slightly paler and greyer than birds from extreme southwest-

ern Saskatchewan and southeastern Alberta, but apparently they do not differ sufficiently to justify separation as *enthymia*. A series of 7 from southwestern Manitoba, referred to *enthymia* by some, differs in being of greyer dorsal coloration from our southeastern Alberta and southwestern Saskatchewan series, but instead of being paler they are consistently darker.

Todd (1947) examined 22 specimens from Last Mountain Lake, Davidson, and Elbow. He referred them to *leucolaema* after an examination of the type of *leucolaema* and that of *enthymia*. He seriously questions the validity of *enthymia*.

Tree Swallow. *Iridoprocne bicolor* (Vieillot)

Cypress Hills Region. Apparently an uncommon breeder; but may be more numerous in migration. Macoun (1903) says that Spreadborough saw 2 at Crane Lake in 1894. Bent (1908) recorded a few in 1905 and only one in 1906. He says that Day found a nest on June 9, 1905. Taverner saw the species at Bigstick Lake on August 9, 1920, but noted none in 1921. In 1948, our party saw only a single bird on June 3 at Maple Creek.

Flotten Lake. In 1948, we observed 20, 5 miles west of Dorintosh; on August 6, between 150 and 200 were noted at Flotten Lake; and on August 10, 5 also at Flotten Lake. In 1947, Robert P. Allen (MS.) recorded this species, May 8 to 11, at Jackfish Lake, near Cochin, and he recorded the species at Flotten Lake on May 14 of the same year.

Bank Swallow. *Riparia riparia riparia* (Linnaeus)

Cypress Hills Region. Breeds locally where roads or water provide cuts adequate for its needs. In 1948, 12 were noted about nesting burrows in a cut in the lower Cypress Hills beside Highway 21. It was also noted on both the plains and in the Cypress Hills, as follows: June 13(25), 15(8), 17(45), 19(8), 24(2), 26(2); July 3(3). Bent (1908) and Taverner in 1921 also found this species locally common. Macoun (1903) says that Spreadborough found nests at Skull Creek, near Crane Lake.

Flotten Lake Region. Noted on July 18(8), 23(1), 30(2), 31(2); August 3(15), 5(4), 6(7).

Specimen, National Museum of Canada:

Cypress Lake: 1 ad. ♂; May 20, 1921

Rough-winged Swallow. *Stelgidopteryx ruficollis serripennis* (Audubon)

Cypress Hills Region. This species was placed on the hypothetical list of Saskatchewan birds by Mitchell (1924). No mention of its occurrence is made by Macoun (1903) or Bent (1908), and Taverner in 1921 and Young in 1926 did not identify it. Mitchell (Potter, 1943b) collected a specimen, evidently the first for the Province, on May 22, 1925, near Ravenscrag, and F. G. Bard took a female on June 6, 1934, in Cypress Hills Park, which is in the Saskatchewan Provincial Museum.

In 1948, however, we found this swallow not uncommon. At Maple Creek, 4 were observed on June 8, 6 on June 10, and 4 on July 12. At Cypress Lake, 3 were noted on June 17; 7 were seen 3 miles north of Willow Creek, near the Montana border, on June 21; and 5, south of Ravenscrag on July 8.

Specimens, National Museum of Canada:

Willow Creek (3 miles north): 1 ad. ♀; June 21, 1948

Maple Creek: 1 ad. ♀, 1 ad. unsexed; June 10, 1948

Barn Swallow. *Hirundo rustica erythrogaster* Boddaert

Cypress Hills Region. In 1948, this swallow was fairly common and breeding in the vicinity of buildings both on the plains and in the Cypress Hills. We observed it on June 3(3), 7(4), 8(4), 10(2), 13(4), 15(8), 16(3), 17(10), 19(2), 23(2), 24(4), 26(6), 28(2), 30(2); July 2(1), 3(8), 6(3), 7(2), 8(8), 13(2).

Flotten Lake Region. Common in the southern part of the region about buildings from Meadow Lake north to Dorintosh where noted on July 18(2), 19(1), 23(2), 30(10), 12(2). Two were noted at Waterhen Lake but none was seen at Flotten Lake.

Greater Cliff Swallow. *Petrochelidon pyrrhonota hypopolia* Oberholser

Cypress Hills Region. In 1948, this was locally a common species, its presence determined by the availability of nesting sites. On June 19, about 80 nests were counted under a culvert over Gap Creek, southwest of Maple Creek. The species was noted south to the Montana border. It was observed as follows: June 13(1), 17(1), 19(85), 21(20), 24(8), 26(4); July 8(8).

Flotten Lake. Two at Flotten Lake on August 8 was our only observation.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂; May 25, 1921

Maple Creek (8 miles southwest): 4 ad. ♂, 5 ad. ♀; June 19, 1948

I agree with Rand (1948) that *hypopolia* is a recognizable race. He has discussed (loc. cit.) the material in the National Museum, and our additional good series, listed above, indicates that, although there is a certain amount of overlapping of characters, *hypopolia* is a valid race.

Purple Martin. *Progne subis subis* (Linnaeus)

Flotten Lake Region. Purple martins were breeding in a rough martin house about 3 miles west of Dorintosh on July 21 as evidenced by adults carrying food. Here on July 21, 6 adults were noted; on July 30, 3; and on August 5, 5. Along Waterhen River, 6 miles west of Dorintosh, 12 (adults and young) were observed on August 3.

Specimen, National Museum of Canada:

Dorintosh (6 miles west): 1 ad. ♂; Aug. 3, 1948

Alberta Canada Jay. *Perisoreus canadensis albescens* Peters

Flotten Lake Region. Very common permanent resident throughout wooded parts of the region where it was noted on the following dates: July 22(6), 23(12), 24(12), 26(11), 27(4), 28(7), 29(18), 30(4), 31(26); August 2(45), 3(31), 4(16), 5(8), 7(12), 9(6), 10(21), 11(10), 12(11), 14(23), 16(27), 18(7), 19(7), 20(6), 21(2), 22(2), 23(8), 24(9), 25(3), 26(9), 27(17), 28(10), 29(6), 30(13), 31(18); September 1(7), 2(15), 3(14), 4(8), 6(8). Noted south to Glaslyn on July 17, 1948.

Specimens, National Museum of Canada:

Flotten Lake: 6 ♂, 10 ♀; July 24 to Sept. 2, 1948

This series of 16 specimens, mostly in fresh plumage, is very uniform and is unquestionably referable to the well-marked race *albescens*.

Northern Blue Jay. *Cyanocitta cristata bromia* Oberholser

Cypress Hills Region. Apparently the only recorded occurrences of the blue jay for the region are by Potter (1943a) who saw one near Ravenscrag on December 31, 1916. A few others were seen during the same winter.

Flotten Lake Region. C. F. Shirley told the writer that the blue jay is present throughout the year at Dorintosh and that it winters commonly. In 1948 we noted it throughout the region, as follows: July 18(1), 23(2), 24(1), 31(7); August 5(2), 6(2), 7(3), 9(2), 10(9), 11(12), 12(6), 13(1), 14(9), 16(17), 19(3), 20(12), 21(3), 22(3), 23(12), 25(6), 26(8), 27(8), 28(10), 29(6), 30(11), 31(5); September 1(3), 2(6), 3(4), 4(5), 6(6).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad.♂, 2 imm.♂, 2 imm. ♀, 1 imm. unsexed; July 31 to Sept. 2, 1948

Sutton (1935) commented on the paleness of a specimen (N.M.C., No. 21512) from Lac la Nonne, Alberta, taken on June 28, 1926, and tentatively referred it to *cyanotephra*. However, this specimen has a much paler crest than any other adult in our collection. Our material from Alberta is inadequate; but of 2 recently-taken specimens from Battle River, Alberta, in fresh October plumage, one is rather pale on the dorsum and crest, but is not outside the range of individual variation in *bromia*; the other is about average for *bromia*.

Our Flotten Lake birds seem referable to *bromia*, although all but one are moulting heavily. The adult is in fresh September plumage and does not seem separable from *bromia*. The immatures, assuming post-juvenal plumage, also are similar to comparable material from Ontario east. The evidence at hand indicates that specimens from the Prairie Provinces are best placed with *bromia*, although there is a tendency toward paler coloration in certain individuals, and additional material, particularly from Alberta, is needed to determine the significance of this with complete certainty.

America Magpie. *Pica pica hudsonia* (Sabine)

Cypress Hills Region. Apparently this species has increased considerably in recent years. Although Macoun (1903) recorded that "in May, 1895 . . . one was seen at the crossing of Frenchman's River on June 22; also at East End Post and Farwell [Fairwell] Creek, where it breeds", the

only evidence of its presence, recorded by Bent (1908) in 1905 and 1906, was the finding by Bishop of a deserted nest. No birds were seen. Taverner's 1921 manuscript notes read, "Under date of June 26 Laing reports that S. Pearse is authority for the statement that in 1892 there were very few magpies in the Eastend section nor for seven or eight years after. Lawrence Potter says that he was on the White Mud River for eight years and there were no magpies. He returned in 1910 and they have been numerous ever since and increasing to date". Potter (1930) says that in 1901-1904 the magpie was fairly common but that it vanished in the next 6 years. In 1910 a few appeared again and the species has increased in numbers since. In 1921 Taverner and Laing found the species rather common on the north side of Cypress Lake and very common near Eastend.

In 1948 we found this species very common both in the Cypress Hills and on the plains wherever coulées or plantations provided trees or bushes; breeding locally south to the Montana border and several nests and young were located. Noted as follows: June 3(7), 4(8), 7(15), 8(16), 10(27), 11(7), 12(2), 13(4), 14(2), 15(6), 16(14), 17(10), 18(6), 19(15), 20(1), 21(13), 22(2), 23(4), 24(14), 25(2), 26(13), 28(7), 29(3), 30(12); July 2(45), 3(12), 5(21), 6(2), 7(8), 8(3), 12(35), 13(37).

Flotten Lake Region. Uncommon in summer. Two were noted at Beaver River on July 30, 1948 and a single at Flotten Lake on August 21. On September 3, 2 were seen between Flotten Lake and Meadow Lake. C. F. Shirley and others were emphatic in stating that this species is considerably more common in winter than in summer. A specimen was taken by Shirley at Dorintosh in December 1948, and forwarded to MacDonald for mounting and is in the latter's private collection.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂; June 3, 1921

Eastend: 1 ad. ♂, 1 ad. ♀, 1 juv. ♂, 3 juv. ♀; June 17 to 27, 1921

Cypress Hills: 2 ad. ♂, 1 ad. ♀; June 11 to 18, 1948

Northern Raven. *Corvus corax principalis* Ridgway

Cypress Hills Region. According to Potter (1930), the raven was never common in the region. At that writing he had recorded only 2 or 3 individuals, the latest in 1912. Later he implied (1943a) that the species no longer occurred in the region and gave his last record as January 12, 1916.

Flotten Lake Region. Not uncommon permanent resident in forests throughout the region. Noted as follows: July 22(1), 23(2), 24(9), 26(4), 27(5), 29(5), 30(5), 31(2); August 5(3), 9(2), 10(2), 11(1), 12(1), 14(1), 16(4), 19(2), 20(5), 21(5), 22(1), 23(5), 24(3), 25(3), 26(3), 27(5), 28(1), 29(5), 30(6), 31(3); September 1(10), 2(4), 4(5), 5(7), 6(9). C. F. Shirley told the writer that it is common in winter.

Specimens, National Museum of Canada:

Flotten Lake: 1 imm. ♂, 1 imm. ♀, 1 imm. unsexed; July 24 to Aug. 27, 1948

Western Crow. *Corvus brachyrhynchos hesperis* Ridgway

Cypress Hills Region. In 1948, this species was fairly common in the vicinity of the Cypress Hills where abundant nesting sites are available. In the nesting season it was frequently noted on the plains, although a few times it was observed at considerable distances from trees. It was recorded

as follows: June 3(10), 4(11), 5(1), 6(1), 7(11), 8(7), 9(3), 10(9), 11(8), 12(6), 13(30), 14(3), 15(10), 16(8), 17(8), 18(3), 19(13), 20(2), 21(18), 22(5), 23(4), 24(52), 25(4), 26(10), 28(6), 29(9), 30(12); July 2(8), 3(3), 5(14), 7(7), 8(6), 12(8), 13(12).

Taverner and Laing in 1921 found the crow common at Cypress Lake and Eastend. Taverner (MS.) recorded at Cypress Lake that "I flushed a female blue-winged teal from a patch of rose bushes near the lake. She fluttered off much disconcerted as though she had a nest. A crow was flying by at the time evidently bound for the nearby hills but paused in an instant on sight of the perturbed duck, wheeled and came back and all the time I remained hunting for the nest the crow remained in the immediate neighbourhood. At last I gave up and had hardly vacated the locality before the crow was there conducting a search of its own. I do not think it found the nest, but I caught it there several times again that day. It was perfectly apparent that this crow knew what the duck's action meant just as well as I did".

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 2 ad. ♀; June 10, 1921

Eastend: 2 ad. ♂, 4 ad. ♀, 1 juv. ♀; June 16 to 23, 1921

Cypress Hills: 1 ad. ♂, 1 ad. ♀; June 12, 1948

Measurements of the 1948 specimens are (in mm.): 1 ad. male, wing, 300; tail, 173; tarsus, 55.5; exposed culmen, 45.5. 1 ad. ♀: wing, 302; tail, 174; tarsus, 55.5; exposed culmen, 46.

Crow. *Corvus brachyrhynchos* subsp.

Flotten Lake Region. In 1948 crows were common south of the Waterhen River, much less so north of it. Crows were recorded on July 18(2), 19(11), 22(4), 23(4), 30(23); August 2(1), 3(12), 4(2), 6(40), 7(1), 10(1), 12(13), 13(8), 16(3), 18(2), 20(1), 21(40), 25(3), 26(2), 27(3), 28(4), 29(5), 30(3), 31(11); September 1(3), 2(2), 3(20), 4(5), 6(3).

No specimens are available and I am, therefore, unable to determine the subspecific status of crows of the region.

[Pinion Jay. *Gymnorhinus cyanocephalus* Wied. Potter (1943a) published a sight record of a bird identified by him as of this species in the Eastend area on September 16, 1910. Unfortunately the specimen could not be collected.]

Clark Nutcracker. *Nucifraga columbiana* (Wilson)

Cypress Hills Region. Mitchell (1924) recorded a specimen taken at Ravensrag on September 19, 1919, by Spencer Pearse who observed several on his ranch that year. Potter (1943a) states that Pearse saw another in September 1925.

Long-tailed Chickadee. *Parus atricapillus septentrionalis* Harris

Cypress Hills Region. In 1948, this was a common breeding species in the Cypress Hills occurring throughout the coniferous and aspen forests at higher altitudes and down along the wooded coulees almost to the plains, but not observed on the plains. A nest, 9 feet up in a dead aspen, contained large young on June 9. Young first observed in flight, June 24. Observed on June 3(2), 5(5), 6(2), 7(4), 8(2), 9(3), 10(2), 11(2), 14(4), 16(1), 17(1), 18(4), 19(2), 20(2), 22(8), 23(2), 24(4), 25(19), 26(6), 28(6), 29(3), 30(3); July 2(3), 5(2), 7(8), 12(6), 13(4).

Macoun (1903) recorded only 2 seen by Spreadborough in the east end of the Cypress Hills on June 27, 1894. Bent (1908) says that Bishop found it "tolerably common in the Cypress Hills and the upper part of Maple Creek". Taverner in 1921 recorded only one, a sight record by Laing on June 26. Young in 1926 saw the species regularly, but not more than 4 in any one day. Potter (1929) recorded 3 chickadees, probably this species, in the valley of Frenchman River, December 26, 1928.

Flotten Lake Region. Common permanent resident throughout the region. Observed in 1948 on July 19(3), 23(12), 24(10), 26(11), 27(8), 28(10), 29(33), 30(1), 31(12); August 2(7), 3(5), 4(8), 5(4), 6(6), 7(3), 10(26), 11(6), 12(16), 14(9), 16(39), 19(5), 20(6), 21(6), 23(7), 25(6), 26(10), 27(18), 28(15), 29(3), 30(20), 31(18); September 1(12), 2(6), 4(26), 6(12).

Specimens, National Museum of Canada:

Cypress Hills: 7 ad. ♂, 2 ad. ♀, 1 juv. ♂; June 5 to 30, 1948

Maple Creek (4 miles south): 1 ad. ♂, 1 juv. ♂; June 24, 1948

Flotten Lake: 1 ad. ♂, 2 ad. ♀, 1 ad. unsexed, 12 imm.; July 24 to Sept. 4, 1948

Recent taxonomic studies of the races of this chickadee have been made by Taverner (1940), Duvall (1945), and Rand (1948). Taverner apparently concluded that no significant differences exist between *atricapillus* and populations that had been referred to *septrionalis* in Canada. Duvall recognized the colour differences but, apparently, due to inadequate material he concluded that birds from the Canadian prairie provinces are of the same size as *atricapillus* and, therefore, referred them to *anamesus*. Rand, on the basis of material in the National Museum of Canada, concluded that Canadian prairie birds should be called *septrionalis*.

The writer agrees with Rand. The additional material, listed above, is in both size and colour clearly referable to *septrionalis*. Measurements of 8 breeding adult males from the Cypress Hills region are (in mm.): wing, 65.5-69 (average 67.6); tail 63-68.5 (65.2); of 2 adult females: wing, average 64.5; tail, average 64.7. From Flotten Lake a male in complete post-juvenal plumage has a wing length of 69.5 mm. and the tail measures 67. An adult male in fresh plumage from Flotten Lake has a wing length of 72 mm., and the tail length is 69.5. Four females in fresh autumn plumage from Flotten Lake measure: wing, 64-66 (average 65.12); tail, 63.2-66 (64.3).

Brown-headed Chickadee. *Parus hudsonicus hudsonicus* Forster

Flotten Lake Region. Common permanent resident in coniferous forest throughout the region. Observed as follows: July 22(3), 23(3), 24(3), 26(16), 27(2), 28(7), 29(8), 31(12); August 2(8), 3(16), 4(8), 5(5), 6(3), 7(4), 9(6), 10(10), 11(2), 12(2), 14(8), 16(32), 18(1), 20(2), 23(8), 24(6), 25(1), 26(9), 27(6), 28(9), 30(6), 31(6); September 2(6), 4(5), 6(3).

Specimens, National Museum of Canada:

Flotten Lake: 5 ad. ♂, 6 juv.; July 26 to Sept. 4, 1948

A study of the races of this chickadee is currently being made by the writer.

White-breasted Nuthatch. *Sitta carolinensis* subsp.

Cypress Hills Region. In 1921, Laing recorded in his manuscript notes a nuthatch of this species. The bird was seen at close range. Whether or not Mitchell's (1924) vague reference to the occurrence of this species in the Cypress Hills is based on this record is not known by the present writer. There seem to be no other published records for the region.

Red-breasted Nuthatch. *Sitta canadensis* Linnaeus

Cypress Hills Region. In 1948 this was an uncommon summer resident in the coniferous forests of the Cypress Hills. A pair was noted daily from June 3 to July 13 in lodgepole pine forest near camp and another pair was noted irregularly also in lodgepole pine half a mile distant. The only others observed were a pair in mature white spruce forest in the Cypress Hills several miles east of the Alberta-Saskatchewan boundary on June 30. The pair noted near camp apparently were breeding, but the nest was not discovered.

Bent (1908) quotes Bishop as having heard a nuthatch at the summit of the Cypress Hills on July 29, 1906. Potter (MS.) saw a single specimen in July 1922. Taverner and Laing in 1921 did not record the species but Young in 1926 saw one on May 25 and on June 4. Austin W. Cameron (MS.) saw one on a barn roof near the P.F.R.A. Middle Creek reservoir, out on the plains some 12 miles south of the Cypress Hills forest, August 12, 1946.

Flotten Lake Region. Rather common throughout the region in jack pine and other coniferous forests. In 1948, we recorded it on July 19(1), 22(1), 23(2), 24(2), 26(7), 27(1), 28(2), 29(3); August 2(3), 3(2), 4(1), 6(4), 10(4), 11(4), 12(5), 13(1), 14(7), 16(8), 19(12), 20(4), 21(1), 22(1), 23(9), 24(4), 25(4), 26(12), 27(10), 28(12), 29(10), 30(10), 31(26); September 1(16), 2(18), 3(14), 5(2), 6(7).

Specimens, National Museum of Canada:

Cypress Hills: 2 ad. ♂; July 5 to 10, 1948

Flotten Lake: 2 ad. ♀, 1 imm. ♂, 2 imm. unsexed; July 29 to Aug. 14, 1948

Brown Creeper. *Certhia familiaris americana* Bonaparte

Flotten Lake Region. Apparently an uncommon breeder. An adult and 2 juvenals, not long out of nest, were observed by the writer in a mature white spruce forest 2 miles east of Flotten Lake on July 26, 1948. Our only other observation was of 2 noted by MacDonald on September 6.

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 1 juv. ♀, 1 juv. unsexed; July 26 to Sept. 6, 1948

[Dipper. *Cinclus mexicanus unicolor* Bonaparte. Potter's (1943a) remarks on suspected occurrences of the dipper in the Cypress Hills are much too vague.]

Western House Wren. *Troglodytes aedon parkmanii* Audubon

Cypress Hills Region. In 1948, a common summer resident in the aspen woodland of the Cypress Hills and down to the plains along the wooded coulees. Several nests were found, 2 on July 13. The species was recorded

on June 3(1), 6(1), 7(1), 8(4), 9(3), 10(1), 11(1), 12(1), 13(3), 14(1), 17(4), 19(3), 20(1), 22(1), 24(12), 26(9), 28(1), 29(2), 30(1); July 2(4), 5(10), 7(6), 12(4), 13(10).

Macoun (1903) says that Spreadborough found it abundant at Crane Lake, Skull Creek, and the east end of Cypress Hills in June 1894. Bent (1908) says that it was very abundant in the timber along the creeks. Taverner and Laing in 1921 noted it as quite common in the shrubbery of the coulées at Cypress Lake, rather less numerous at Eastend, and Young in 1926 frequently recorded it.

Flotten Lake Region. In 1948, this species was noted only twice. On July 19, 2 were observed at Dorintosh and on August 6 one at Meadow River near Meadow Lake. It was not observed in the unsettled country north of Dorintosh.

Specimens, National Museum of Canada:

Cypress Lake: 4 ad. ♂; June 6 to 10, 1948

Cypress Hills: 1 ad. ♂, 2 ad. ♀, 1 juv. ♀; July 6 to 13, 1948

Maple Creek (3 to 5 miles south): 4 ad. ♂; June 28, 1926, and June 24, 1948

Common Rock Wren. *Salpinctes obsoletus obsoletus* (Say)

Cypress Hills Region. In 1948, this species was observed at only one locality. On July 8, eleven, most of which were juvenals, were noted among sandstone outcropping on the juniper-clad (*Juniperus horizontalis*) summit of the west end of Old Man On His Back Plateau.

Macoun (1903) recorded that Spreadborough saw a male in the east end of Cypress Hills, June 26, 1894. Bent (1908) did not record it. Taverner and Laing in 1921 recorded the species "amongst the broken land along the southern valley side at Eastend we found them not uncommon". Mitchell (1924) recorded, without further details, specimens taken near Ravenscrag. F. G. Beal (MS.) secured a male near Eastend on June 12, 1934.

Specimens, National Museum of Canada:

Cypress Hills: 1 ad. ♂; June 26, 1894

Eastend: 4 ad. ♂; June 17 to 22, 1921

Old Man On His Back Plateau: 3 juv. ♂, 2 juv. ♀; July 8, 1948

Mockingbird. *Mimus polyglottos* subsp.

Cypress Hills Region. Although this species was not included in Mitchell's (1924) list of the birds of Saskatchewan, it seems that at least 3 specimens have been taken in the Cypress Hills region since that work was published. Potter (1928) took a specimen at Eastend on May 31, 1928. This is now in the Saskatchewan Provincial Museum, as also is another taken by S. A. Mann, on November 1, 1929, at Skull Creek near Piapot. A third specimen is that referred to in the following excerpt from a letter written to Taverner by Charles F. Holmes, dated June 10, 1935: "You will be interested to hear that I collected a male mockingbird yesterday in the Whitemud". The present whereabouts of this specimen is unknown to the writer. The present writer has not examined any of these specimens and, therefore, does not know their racial status.

Western Catbird. *Dumetella carolinensis ruficrissa* Aldrich

Cypress Hills Region. In 1948, the catbird was locally fairly common and breeding in the shrubbery along the wooded coulées and streams, considerably less common in shrubbery and thickets of the upper Cypress Hills. It was recorded on June 3(2), 5(1), 8(4), 10(8), 17(5), 19(2), 24(14), 26(10); July 5(6), 6(6), 7(7), 8(1), 12(10), 13(2).

Flotten Lake Region. In 1948, we did not find the catbird north of Beaver River where on July 18 one was observed and 2 on August 6. One was noted near Dorintosh on July 23. The species was not uncommon in the willow-alders along Meadow River near Meadow Lake, July 18 to 20, and on July 18 a short-tailed juvenal, not long out of the nest, attested to the breeding of the species there.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 1 ad. ♀; June 1, 1921; June 17, 1948

Maple Creek: 3 ad. ♂, 2 ad. ♀; June 21, 1926; June 17 to July 5, 1948

Aldrich (1946) described *D. c. ruficrissa*, a western race, on the basis of its paler ventral coloration. After a careful study of the material listed above, together with good series from well-scattered Canadian localities in the National Museum, the present writer is of the opinion that although there is a certain amount of overlapping of characters in eastern and western birds, the race *ruficrissa* is worthy of recognition.

Western Brown Thrasher. *Toxostoma rufum longicauda* (Baird)

Cypress Hills Region. In 1948 it was observed in tall shrub tangles along the north and south lower slopes of Cypress Hills; breeding. Not observed in the higher parts of the Cypress Hills. It was recorded on June 3(2), 8(1), 13(1), 16(1), 17(1), 19(1), 24(4, including an adult carrying food), 26(1); July 12(6), 13(4). Bent (1908) did not record the brown thrasher in 1905, but in 1906 he noted it as "uncommon in the timber belts". Taverner and Laing also found it uncommon in 1921, noting only a single singing male on the north side of Cypress Lake, May 30 and 31, and another individual in the Eastend region on June 23.

This species was noted by the writer north to North Battleford where 4 were seen in a short walk on July 16.

Specimens, National Museum of Canada:

Maple Creek (4 to 10 miles southwest): 1 ad. ♂, 2 ad. ♀; June 19 to 24, 1948

The male listed above measures (in mm.): wing, 110; tail, 136. The females measure, respectively: wing, 104, 105.5; tail, 131, 131. The large size of these specimens supports the validity of *longicauda*. They average paler than eastern specimens, but this is probably due to bleaching. The writer can see no constant colour difference between western and eastern specimens in fresh autumn plumage.

Sage Thrasher. *Oreoscoptes montanus* (Townsend)

Cypress Hills Region. There is little to add to Potter's (1937 and 1943a) accounts of the occurrence and breeding of this species in the Frenchman River Valley. The species was not observed by us, perhaps

because this particular area received little attention in 1948, due to the fact that so much has been done there previously by Potter, Bard, Taverner, and Laing.

Eastern American Robin. *Turdus migratorius migratorius* Linnaeus

Flotten Lake Region. This species in 1948 was a very common summer resident, breeding throughout. In 1948, it was recorded on July 19(8), 23(10), 24(3), 26(6), 27(5), 28(12), 29(10), 30(19), 31(7); August 2(18), 3(11), 4(7), 5(11), 6(11), 7(10), 9(6), 10(11), 11(3), 12(18), 13(4), 14(7), 16(1), 18(1), 20(2), 23(8), 24(6), 25(1), 26(10), 27(6), 28(9), 29(4), 30(6), 31(6); September 2(6), 4(5), 6(3). Robert P. Allen (MS.) in 1947 found several nests with "young nearly out of nests early July".

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 2 ad. ♀, 4 imm.; July 26 to Sept. 2, 1948

All are referable to *migratorius*, but some may be migrants. However, the adult male taken on July 26 and an adult female on August 9 probably represent the breeding population.

Western American Robin. *Turdus migratorius propinquus* Ridgway

Cypress Hills Region. Common throughout the higher wooded parts of the Cypress Hills and at lower altitudes where woods occur along coulees, lakes, or streams. The species was recorded in daily numbers varying from 2 to 28. Several nests were noted.

Specimens, National Museum of Canada:

Cypress Hills: 4 ad. ♂, 2 ad. ♀; June 5 to July 2, 1948

Although Bent (1908) referred all his southwestern Saskatchewan specimens to this race, Taverner (1934) and the A.O.U. Check-list (1931) confine its Canadian distribution to southeastern British Columbia. Rand (1948) recently outlined its distribution in southern Alberta on the basis of material in the National Museum of Canada. Our additional Cypress Hills, Saskatchewan, material also proves to be referable to *propinquus*. However, the easternmost limits of this race in Canada cannot at present be determined with certainty because of the inadequacy of breeding material from points farther east in the southern part of the Prairie Provinces.

Eastern Hermit Thrush. *Hylocichla guttata faxoni* Bangs and Penard

Flotten Lake Region. Fairly common breeder, occurring in coniferous and mixed forests throughout the region. In 1948, it was recorded on July 18(2), 23(1), 26(1 adult accompanied by 3 young), 27(3), 28(1), 29(4), 30(1), 31(2); August 2(11), 3(10), 4(2), 5(2), 6(2), 7(2), 9(2), 10(1 carrying food), 11(4), 13(1), 14(4), 16(7), and in similar numbers to September 6 when field work terminated.

Specimens, National Museum of Canada:

Flotten Lake: 2 ad. ♀, 4 imm.; July 26 to Aug. 31, 1948

Olive-backed Thrush. *Hylocichla ustulata swainsoni* (Tschudi)

Cypress Hills Region. In 1948, an uncommon summer resident in the upper Cypress Hills, where it was observed usually in mixed or aspen forest on June 4(1), 5(2), 6(1), 10(2), 12(1), 16(1), 17(2), 19(1), 23(1), 25(1), 26(1), 29(1); July 2(2), 5(1), 12(1). Bent (1908) recorded a juvenal taken on July 27, 1906, and states that the parent was heard by Bishop on the summit of the Cypress Hills. Taverner and Laing in 1921 were able to collect at least 7 at Cypress Lake between May 30 and June 3, some of which were probably migrants. They did not record the species later in the season at Eastend.

Flotten Lake Region. This species appeared to be less common than the preceding, but it was noted throughout the region. That it breeds is attested by a young juvenal, August 9, 1948.

Specimens, National Museum of Canada:

Cypress Lake: 4 ad. ♂, 3 ad. ♀; May 30 to June 3, 1948

Cypress Hills: 1 ad. ♂; June 12, 1948

Flotten Lake: 1 ad. ♀, 2 post-juv., 1 juv.; July 26 to Aug. 16, 1948

Of the recently taken Flotten Lake material, the adult female, listed above, is greyer than the types of *almae*. The 2 post-juvenals are, on the other hand, decidedly olivaceous.

Gray-cheeked Thrush. *Hylocichla minima minima* (Lafresnaye)

Cypress Hills Region. Migrant. Bent (1908) recorded the taking of 2 specimens of this species in woodland along Maple Creek on June 8, 1906. One of these he referred to *bicknelli* on the basis of very small size.

Willow Thrush. *Hylocichla fuscescens salicicola* (Ridgway)

Cypress Hills Region. In 1948, this thrush was quite common in the Cypress Hills in the broad aspen zone just below coniferous forest. It was common, too, in the willow tangles of the coulées and streams in the lower Cypress Hills, but was not observed in the coniferous forest of the highest parts of the Hills.

Flotten Lake Region. Observed only at Meadow Lake in the southern part of the region where, on July 18, 2 were recorded; also another individual on the following date. Between the Cypress Hills and Meadow Lake the species was often heard where suitable habitat occurred.

Specimens, National Museum of Canada:

Cypress Hills: 1 ad. ♂, 2 ad. ♀; June 28 to July 7, 1948

Eastern Bluebird. *Sialia sialis sialis* (Linnaeus)

Cypress Hills Region. In 1948, this species was noted by us only on the north slope of the lower Cypress Hills along Highway 21. Here it was noted on June 8(3), 10(5), 15(2), 16(1), 26(3), but because these birds remained in the proximity of ranch houses we refrained from collecting specimens. Potter (1923) recorded the breeding of a pair of this species in 1922 at Eastend. The same author (1924) recorded the appearance of an additional pair in 1923 which did not nest and he wrote (1943a) that it was then an

irregular and uncommon visitant. A specimen collected by Potter at Eastend on July 16, 1922, was examined by the writer at the Saskatchewan Provincial Museum. The species was not recorded by Bent (1908), or by Taverner and Laing in 1921. Rand (1948) did not record it on the Alberta side of the Cypress Hills and the above appear to be the westernmost recorded breeding stations of the species in Canada.

Mountain Bluebird. *Sialia currucoides* (Bechstein)

Cypress Hills Region. This species is common in the aspen groves at all altitudes in the Cypress Hills and it occurs also on the plains where cavities in trees provide nesting places. It was recorded in 1948 on June 5(2, one of which was carrying nesting material), 11(6), 12(2), 13(3), 15(1), 17(1), 21(6, a nest in a dilapidated bird house in a sparse poplar (*P. balsamifera*) windbreak about a deserted ranch house on the plains near the Montana border), 26(2), 30(1); July 2(3), 5(11), 7(2), 8(1), 12(7), 13(1). Potter (1923) wrote that, although this bluebird was at that time present near Eastend in abundance, it had increased, having been quite scarce some 12 years previously. Bent (1908) did not record it in 1905 and 1906.

Flotten Lake Region. C. F. Shirley told the writer that he saw a few bluebirds on the Matheson Flats, south of Matheson Lake, almost every spring. Robert Allen noted the species at Flotten Lake in the spring of 1947.

Specimens, National Museum of Canada:

Eastend: 1 ad. ♂; June 21, 1921

Cypress Hills: 4 ad. ♂, 2 ad ♀; June 11 to July 2, 1948

Townsend Solitaire. *Myadestes townsendi* (Audubon)

Cypress Hills Region. Charles F. Holmes collected a male on April 21, 1931, at his home in Dollard. Again in 1933, another male was taken by Mr. Holmes who stated in a letter to Taverner, dated September 16, 1933, "I have taken another Townsend's Solitaire male. This is the second I have taken in two years and I believe is the third record for the province". Potter (1943a) said that he observed one at Eastend on April 19, 1908, and that he saw another at his ranch on April 24, 1941.

Eastern Golden-crowned Kinglet. *Regulus satrapa* subsp.

Flotten Lake Region. Although much coniferous forest was examined, which apparently was suitable for the breeding of this species, this kinglet was not observed until September 4, when MacDonald noted 6 at Flotten Lake. On September 6 he noted 4 more at the same place, 'squeaked' one up to within 5 feet, noted unquestionably the diagnostic markings. There seems to be no recorded instance of the breeding of this species in Saskatchewan, although it probably does so farther north.

Eastern Ruby-crowned Kinglet. *Regulus calendula calendula* (Linnaeus)

Flotten Lake Region. In 1948, not uncommon in coniferous and in mixed forests near Flotten Lake and Jeanette Lake. That it breeds is strongly indicated by a specimen, taken on August 2, which, in juvenal

plumage, had not begun to assume post-juvenal plumage and was obviously not long out of the nest. It was recorded on July 27(1); August 2(7), 4(1), 7(2), 9(1), 11(3), 12(1), 16(3), 25(6), 26(4), 27(10), 30(2); September 1(3), 2(2), 4(8), 6(5). Robert P. Allen (MS.) in 1947 noted the species in song on May 16 and observed many pairs by June 1.

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 4 imm., Aug. 4 to Sept. 1, 1948

Jeanette Lake: 1 juv. ♂; Aug. 2, 1948

Western Pipit. *Anthus spinoletta pacificus* Todd

Cypress Hills Region. Migrant. Four were observed by Taverner and Laing at Cypress Lake on May 23, 1921; and Hoyes Lloyd (MS.) saw 2 in the region on October 7, 1922, and 6 on the following day.

Flotten Lake Region. Migrant. This species appeared at Flotten Lake on August 31 when 13 were observed. Noted also on September 1(8), 2(3), 3(6), 4(21), 5(4), 6(34).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 8 imm.; Aug. 31 to Sept. 4, 1948

This series of 9 is very uniform. It is readily separable from a series of 18 September-October birds from Ontario, Quebec, and southern Baffin Island by its much paler (less brownish) upper parts. Spring and autumn specimens from Alberta (Lac la Nonne, Edmonton, Medicine Hat) also seem closer to *pacificus*, as also is a single September migrant from Indian Head, Saskatchewan. Migrants from southwestern Manitoba (Oak Lake, Whitewater Lake, and Shoal Lake) are more variable, averaging darker, but perhaps most are nearer *pacificus*. However, 2 specimens (Shoal Lake, September 14, 1918) seem definitely referable to *rubescens*.

Sprague Pipit. *Anthus spragueii* (Audubon)

Cypress Hills Region. In 1948, this species was not uncommon in the Cypress Hills and on the plains. It was most often observed in the air over treeless areas high in the Cypress Hills where it was noted west to the Alberta border. Recorded on June 7(3), 13(2), 10(4), 17(1), 19(3), 22(3), 23(3), 30(4). Taverner and Laing in 1921 recorded it as quite common at Cypress Lake, where Laing found a partly completed nest, and fairly common also at Eastend. Young in 1926 recorded it in numbers varying from 0 to 6 in a day on the north slopes of the Hills. He located a nest with 5 eggs on July 5.

Specimens, National Museum of Canada:

Cypress Hills: 2 ad. ♀; June 24 to July 5, 1926

Bohemian Waxwing. *Bombycilla garrula pallidiceps* Reichenow

Cypress Hills Region. Potter (1925) mentions this species as usually one of the commonest winter residents. Hoyes Lloyd has a specimen taken 12 miles south of Piapot on October 9, 1922.

Flotten Lake Region. Robert P. Allen (MS.) saw this species at Flotten Lake on June 1, 1947.

Cedar Waxwing. *Bombycilla cedrorum* Vieillot

Cypress Hills Region. In 1948, a very common summer resident throughout the wooded parts of the Cypress Hills; breeding. Observed on June 3(6), 4(1), 5(14), 6(6), 7(4), 8(12), 9(10), 10(6), 11(2), 12(17), 13(4), 14(23), 15(2), 16(2), 17(8), 18(7), 19(3), 20(4), 21(4), 22(15), 23(2), 24(6), 25(9), 26(2), 29(11), 30(8); July 2(9), 5(8), 7(8). A nest on June 22 was nearing completion in a white spruce; another was built in *Crataegus* and on June 29 contained 5 eggs.

Potter (1924) speaks of the infrequent occurrences of this species, he having seen it on only two occasions in 22 years of residence at Eastend. Moreover, Macoun (1904) makes no mention of its occurrence in the Cypress Hills. Bent (1908) says few were seen in 1906. Taverner and Laing in 1921 recorded it as occasionally seen at both Cypress Hills and Eastend, but not very commonly. Young in 1926 did not record it at all. In 1948 it was very common, as indicated above. Rand (1948), too, found it fairly common in 1945 on the Alberta side of the Cypress Hills.

Flotten Lake Region. In 1948 a common summer resident throughout; breeding. Recorded on July 18(8), 19(4), 22(8), 23(12), 24(2), 26(11), 27(8), 28(8), 29(10), 30(8), 31(16); August 2(5), 3(1), 4(6), 5(18), 6(14), 7(3), 9(40), 10(12), 11(30), 12(9), 14(14), 16(7), 19(25), 20(8), 23(20), 25(6), 26(10), 27(6), 28(14), 29(25), 30(24), 31(14); September 2(2), 4(8), 6(5).

First flying young seen on August 9.

Specimens, National Museum of Canada:

Cypress Hills: 2 ad. ♂, 1 ad. ♀; June 8, 1948

Flotten Lake: 2 ad. ♂; July 31 to Aug. 31, 1948

Northwestern Shrike. *Lanius excubitor invictus* Grinnell

Cypress Hills Region. Winter visitor. Steve A. Mann (Blue Jay, vol. 1, No. 2, p. 12) and others have recorded this species in the region during the Christmas census. A specimen taken at the summit of Cypress Hills, 15 miles south of Piapot, on October 9, 1922, is in the collection of Hoyes Lloyd.

White-rumped Shrike. *Lanius ludovicianus excubitorides* Swainson

Cypress Hills Region. In 1948, most often noted about forest edges or tall shrubby tangles on the lower slopes of the Cypress Hills, but observed also in sparse shrubbery about a ranch house near Crane Lake and also at other tree plantations well out on the otherwise treeless plains. Recorded on June 3(2), 4(1), 7(1), 10(1), 15(1), 16(2), 19(3), 26(4); July 2(1), 3(3), 7(1), 8(4), 12(4). First flying juvenals noted on July 8.

Flotten Lake Region. This species was not observed north of Meadow Lake where we observed 3 short-tailed juvenals, attended by an adult, on July 19, 1948.

Specimens, National Museum of Canada:

Eastend: 1 ad. ♀; June 15, 1921

Cypress Hills (lower north slopes): 2 ad. ♂, 1 ad. ♀, 1 juv. ♀; June 16 to July 8, 1948

European Starling. *Sturnus vulgaris vulgaris* Linnaeus

Cypress Hills Region. In 1948 this species was apparently not yet common in the region, but was quite widely distributed. It was noted mostly in the wooded areas just south of Maple Creek. One was noted also at a deserted ranch house about 2 miles north of the Montana border on June 21, and on July 13, 4 were seen on upper Fairwell Creek well up in the Cypress Hills. It was recorded on June 3(4), 4(2), 8(3), 10(3), 16(14), 19(2), 21(1), 26(2); July 3(5), 13(4). There is a specimen in the Saskatchewan Provincial Museum taken at Skull Creek, near Piapot, on May 26, 1946. Rand (1948) did not record it on the Alberta side of the Cypress Hills in 1945.

Blue-headed Vireo. *Vireo solitarius solitarius* (Wilson)

Flotten Lake Region. We arrived in this region too late to determine whether or not this species breeds, but it seems likely that it does so. It was recorded on July 27(3); August 2(3), 7(4), 10(9), 11(6), 12(6), 14(1), 16(2).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 7 imm.; July 27 to Aug. 12, 1948

Red-eyed Vireo. *Vireo olivaceus* (Linnaeus)

Cypress Hills Region. Considering the vast areas in the Cypress Hills that appear to be ideal habitat for this species, it is surprisingly uncommon. Rand (1948) says that there were no vireos in the higher parts of the Cypress Hills of Alberta. In 1948, it was observed in stands of aspen or willow in the upper Cypress Hills (2 on June 14; one on June 22, and another on June 25; and 7 on upper Fairwell Creek, June 13); and on the lower slopes, 10 miles southwest of Maple Creek, one was seen on June 19. Taverner remarked (MS.) that Eastend was one of the very few places he had ever been where this species was not a conspicuous bird. In 1921 he and Laing saw none there, but noted a few single individuals at Cypress Lake. Bent (1908) said that Bishop saw several in Maple Creek timber on June 8, 1906. Young in 1926 recorded none.

Flotten Lake Region. A common summer resident, noted in 1948, as follows: July 18(5), 19(6), 22(3), 23(7), 24(12), 26(7), 27(8), 28(11), 29(11), 30(6), 31(11); August 2(12), 3(10), 4(17), 5(3), 6(7), 7(8), 9(3), 10(10), 11(16), 12(18), 13(3), 14(8), 16(13), 18(6), 19(6), 20(3), 23(1), 27(4), 29(5), 30(2), 31(2).

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂, 1 ad. ♀; May 30 to June 6, 1921

Cypress Hills: 2 ad. ♂; June 13 to July 14, 1948

Flotten Lake: 1 ad. ♂, 2 imm.; July 29 to Aug. 10, 1948

Philadelphia Vireo. *Vireo philadelphicus* (Cassin)

Cypress Lake Region. Apparently the only record is that of Bent (1908) of one in the Maple Creek timber on June 8, 1908, probably a migrant.

Flotten Lake Region. In 1948 not uncommon in alder-willow tangles throughout the region: July 19(1), 29(1); August 4(1), 6(2), 10(3), 11(4), 12(8), 16(9), 29(4), 31(2).

Specimens, National Museum of Canada:

Flotten Lake: 5 imm. ♂ and ♀; July 29 to Aug. 12, 1948

Eastern Warbling Vireo. *Vireo gilvus gilvus* (Vieillot)

Cypress Hills Region. Taverner in 1921 saw 2, one of which he collected on May 31, in a coulée at Cypress Lake.

Flotten Lake Region. Robert P. Allen (MS.) saw this species and heard it singing at Flotten Lake on June 4, 1947.

Specimen, National Museum of Canada:

Cypress Lake: 1 ad. ♂; May 31, 1921

Black and White Warbler. *Mniotilta varia* (Linnaeus)

Cypress Lake Region. Migrant. Bent (1908) recorded a few in the Maple Creek timber on May 29, 1905. Taverner and Laing saw one on the north shore of Cypress Lake on May 31, 1921.

Flotten Lake Region. In 1948, this species was common in the forests throughout the region. On August 7 an adult was seen feeding young at Flotten Lake. The species was observed on July 23(1), 24(4), 26(1), 27(1), 28(13); August 4(2), 6(2), 7(5), 9(1), 10(5), 11(8), 12(20), 14(1), 16(5), 25(1), 28(2), 30(1); September 1(1).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 4 imm.; July 23 to Aug. 30, 1948

Tennessee Warbler. *Vermivora peregrina* (Wilson)

Cypress Hills Region. Migrant. Bent (1908) observed a specimen on May 29, 1905, in the Maple Creek timber. Taverner and Laing in 1921 saw a single specimen in a Cypress Lake coulée on May 30.

Flotten Lake Region. Rather common throughout the region, where it was seen on July 18(2), 19(3), 26(2), 27(10), 29(14), 30(2), 31(5); August 1(1), 2(3), 3(3), 4(7), 5(2), 6(6), 7(5), 9(1), 10(2), 11(16), 16(6), 24(8). F. G. Bard (MS.) took a nest and eggs at Cochin, just south of our area, on June 15, 1935.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂; May 30, 1921

Flotten Lake: 1 ad. ♀, 4 imm. ♂, 3 imm. unsexed; July 29 to Aug. 24, 1948

Rocky Mountain Orange-crowned Warbler. *Vermivora celata orestera* Oberholser

Cypress Hills Region. A very common summer resident of the aspen woods, of the upper Cypress Hills; breeds. In 1948 it was recorded on the following dates: June 5(26), 6(12), 8(5), 9(8), 10(4), 11(10), 12(13), 14(14), 17(2), 18(7), 19(1), 20(2), 22(18), 23(2), 25(13), 26(3), 28(8), 29(10), 30(1); July 2(8), 5(7), 7(6). On June 28, an adult was seen

carrying food. Bent (1908) quotes Bishop who found it common, July 25-30, in the Cypress Hills. Taverner and Laing in 1921 recorded it as common in the coulées about Cypress Lake and more numerous in those of Frenchman River Valley near Eastend. Young in 1926 saw it in daily numbers varying between 2 and 10, from May 18 to July 9. He located a nest with 4 eggs on June 10.

Flotten Lake Region. In 1948, this species was observed only a few times near Flotten Lake: July 24(1), 26(1), 27(1), 28(2); August 16(4); September 6(2).

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂, 2 ad. ♀; June 1 to 6, 1921

Eastend: 1 ad. ♂; June 16, 1921

Cypress Hills: 12 ad. ♂, 3 ad. ♀; May 21 to June 10, 1926; June 5 to July 5, 1948

Flotten Lake: 1 ad. ♂, 2 imm. ♂, 2 imm. ♂, 1 imm. unsexed; July 28 to Aug. 24, 1948

Our Cypress Hills series is much less variable than is the small series examined by Rand (1948) from the Alberta side of Cypress Hills. Our large series of southwestern Saskatchewan breeding birds is in both colour and size (14 males: wing, 61-65, average 62.6 mm.) referable undoubtedly to *orestera*. Flotten Lake material is in moult, measurements therefore not being useful. In colour, however, the latter seem surprisingly closer to *orestera* in comparable plumage than to Manitoba specimens of the nominate race, but the drawing of conclusions from such meagre material is risky. Rand (1948) included Edmonton in the Alberta range of *orestera* and Todd (1947) considers it to be the breeding bird at Elbow, Saskatchewan.

Nashville Warbler. *Vermivora ruficapilla* subsp.

Cypress Hills Region. Bent (1908) quotes Bishop as having plainly seen a bird of this species on June 8, 1906.

Flotten Lake Region. One was clearly observed by the writer near Flotten Lake on August 14, 1948. The specimen, unfortunately, was lost in the dense alder tangle it frequented.

Eastern Yellow Warbler. *Dendroica petechia aestiva* (Gmelin)

Cypress Hills Region. A common summer resident of tall shrubbery in the Cypress Hills, more numerous on the lower slopes; breeding. Noted also about tree plantations on the plains, and in such a situation on the arid plains near the Montana border this species was nesting in a sparse pea tree (*Caragana arborescens*) plantation on June 21. The species was noted on June 3(4), 4(2), 5(1), 7(1), 8(11), 10(4), 11(1), 12(2), 13(4), 15(1), 17(12), 19(12), 20(1), 21(8), 22(3), 23(3), 24(18), 25(1), 26(12), 28(1), 29(1); July 1(1), 5(7), 7(7), 12(20), 13(5). Bent (1908) called this species the commonest warbler. Taverner in 1921 found it fairly common in coulées of Cypress Lake and in the shrubbery at Eastend.

Flotten Lake Region. Quite common in tall shrubbery throughout the region; breeds. In 1948 it was seen on July 19(13), 23(5), 24(1), 27(4), 28(2), 30(1); August 6(12), 7(2), 9(10), 10(8), 11(1), 12(1), 13(1). A nest on August 6 at Meadow Lake contained large young.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 1 ad. ♀; June 1, 1921

Maple Creek: 2 ad. ♂; June 8 to 19, 1948

Flotten Lake: 2 ♂, 1 ♀; Aug. 9, 1948

Specimens from southwestern Saskatchewan are certainly *aestiva*. The Flotten Lake breeding birds tend only slightly toward *amnicola*.

Northern Yellow Warbler. *Dendroica petechia amnicola* Batchelder

Flotten Lake Region. Three specimens, listed below, are nearer this form. Presumably they are early migrants as 3 others taken on the same date (see above) are quite clearly *aestiva* and probably represent the breeding population.

Specimens, National Museum of Canada:

Flotten Lake: 3 imm.; Aug. 9, 1948

Magnolia Warbler. *Dendroica magnolia* (Wilson)

Cypress Hills Region. Migrant. Bent (1908) and party saw only one in 1905 and 1906. This was in the Maple Creek timber on June 8. The bird, an adult male, was collected.

Flotten Lake Region. This species probably breeds, but our 1948 party arrived in the region too late in the season to establish this. It was noted in coniferous forest between Meadow Lake and Flotten Lake on July 24(4), 28(2), 29(1); August 7(5), 10(3), 11(18), 12(5), 16(1); September 4(1), 6(2). Robert P. Allen (MS.) observed it at Flotten Lake on June 4, 1947.

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 1 ad. ♀, 2 post-juv. ♂; July 24 to Sept. 4, 1948

Cape May Warbler. *Dendroica tigrina* (Gmelin)

Flotten Lake Region. In 1948 this species was observed only twice. an adult in an alder thicket on the shore of Jeanette Lake, August 2; and an adult female in aspens on an island in Flotten Lake, August 16.

Specimens, National Museum of Canada:

Jeanette Lake: 1 ad. ♂; Aug. 2, 1948

Flotten Lake: 1 ad. ♀; Aug. 16, 1948

Alaska Myrtle Warbler. *Dendroica coronata hooveri* McGregor

Flotten Lake Region. In 1948 a common summer resident throughout. Adults were seen feeding young on July 24, attesting to its breeding there. It was observed on July 24(7), 26(8), 27(1), 28(1), 29(5), 30(2), 31(3); August 2(18), 3(11), 4(3), 5(5), 6(1), 7(2), 9(4), 10(5), 11(6), 12(9), 14(5), 16(7), 19(35), 20(4), 21(6), 22(1), 23(25), 24(20), 25(6), 26(36),

27(40), 28(50), 29(8), 30(25), 31(15); September 1(20), 2(34), 3(4), 4(10), 5(10), 6(25). In 1947, Robert P. Allen (MS.) first recorded this species on May 13.

Specimens, National Museum of Canada:

Flotten Lake: 2 ad. ♂, 2 ad. ♀, 1 juv. ♀, 1 post-juv. ♂; July 24 to Aug. 24, 1948

Wing measurements of 2 adult males are, respectively, 74 and 75 mm.; of the 2 adult females, 72 and 72.5. The primaries are considerably worn. Rand (1948) quite correctly states that more solid black breast is not apparent in our western material as postulated for *hooveri* by Oberholser (1938). Actually the writer finds western birds are less solidly black on the breast than are birds of the nominate race.

Audubon Warbler. *Dendroica auduboni auduboni* (Townsend)

Cypress Hills Region. Common summer resident in the coniferous forests of the Cypress Hills; breeds. On June 26 an adult carrying food was observed. This species was recorded on the following dates: June 3(7), 4(5), 5(17), 6(4), 7(3), 8(8), 9(4), 10(4), 11(4), 12(8), 14(6), 15(1), 16(1), 17(1), 18(4), 20(2), 22(13), 23(3), 24(1), 25(8), 26(2), 28(12), 29(8); July 2(4), 5(4), 7(1), 12(4).

Bent (1908) seems to be the first to have recorded this species in Saskatchewan, saying that a Mr. Eastgate shot a female with food in its mouth in a grove of pines in the Cypress Hills on July 28, 1906. Although it is a common bird of the coniferous forest of the Cypress Hills, no mention of its occurrence there is made by Macoun (1904), nor was it recorded by Taverner and Laing in 1921, nor by Young in 1926. Even more surprising is the following excerpt from a letter dated August 30, 1938 written by L. B. Potter to P. A. Taverner, "Audubon Warbler on May 22, only second record". Potter, a keen bird observer, lived for many years at Eastend. The reason this warbler has been missed, probably, is that these men did not work the higher parts of the Hills where there is coniferous forest.

Specimens, National Museum of Canada:

Cypress Hills: 8 ad. ♂, 9 ad. ♀; June 3 to July 10, 1948

Oberholser (1921) separated a race, *D. a. memorabilis*, of the Rocky Mountains, on the basis of its larger size. Wing measurements of our Cypress Hills males are 77-79 (av. 77.4) compared with an average given by Oberholser (loc. cit.) of 80.5 for *memorabilis* and 74.9 for *auduboni*. We have only 4 breeding-season males from coastal British Columbia, the wings of which measure 73.5-76 (av. 74.4). Grinnell and Miller (1944), although admitting a graded increase in size interiorward, state that many individuals breeding on the coast of California are equivalent in size to Rocky Mountain specimens.

Black-throated Green Warbler. *Dendroica virens virens* (Gmelin)

Flotten Lake Region. Observed only in the vicinity of Flotten Lake where it was seen on July 28(1); August 4(1), 7(3), 9(3), 14(2).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 2 juv. ♂, 1 juv. ♀; July 28 to Aug. 9, 1948

Chestnut-sided Warbler. *Dendroica pensylvanica* (Linnaeus)

Flotten Lake Region. On August 3, 1948, a chestnut-sided warbler was clearly seen by the writer at the edge of an alder tangle south of Matheson Lake. Before it could be collected, however, the bird disappeared into the tangle and was not seen again. It was observed through an 8 X binocular at 25 feet, however, and there could be no mistaking its identity. Although this seems to be the westernmost Saskatchewan record, it is not so surprising in the light of Mowat's (1947) statement that the species was uncommon but regularly observed at Emma Lake in south central Saskatchewan.

Bay-breasted Warbler. *Dendroica castanea* (Wilson)

Flotten Lake. Not uncommon in coniferous forest near Flotten Lake; breeds. Noted in 1948 on July 26(4), 27(3); August 7(1), 8(7), 16(2), 28(1). Juvenals out of the nest were observed being fed by adults on July 26 and August 8.

Specimens, National Museum of Canada:

Flotten Lake: 2 ad. ♂, 1 juv., 2 post-juv.; July 26 to Aug. 28, 1948

Black-poll Warbler. *Dendroica striata* (Forster)

Cypress Hills Region. Migrant. Taverner and Laing in 1921 noted this species on May 30(1), 31(2), and June 1(1), in shrubbery on the north side of Cypress Lake.

Flotten Lake Region. In 1948 this species was observed only once, a single immature noted by the writer between the south end of Matheson Lake and Waterhen River on August 3. As this specimen had not completely assumed post-juvénal plumage, it is possible that the species breeds there, but it was observed nowhere else.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♀; May 31, 1921

Flotten Lake: 1 imm. ♂; Aug. 3, 1948

Burleigh and Peters (1948) described a western race, *D. s. lurida*. The writer prefers to await an opportunity of examining material from certain critical localities before discussing variation in this species.

Western Palm Warbler. *Dendroica palmarum palmarum* (Gmelin)

Flotten Lake Region. Not uncommon summer resident in the alder and willow of bog and water edges; breeds. On August 2, 1948, at Jeanette Lake the writer saw a female feeding 3 juvenals, obviously not long out of the nest. That it is a very common migrant is indicated by the large numbers present in late August and early September. It was recorded in 1948, as follows: July 31(1); August 2(4), 5(1), 6(1), 12(6), 14(1), 16(6), 19(4), 23(1), 24(6), 26(20), 27(12), 28(20), 29(5), 30(11), 31(10); September 1(30), 2(24), 4(20), 6(25).

Specimens, National Museum of Canada:

Jeanette Lake: 1 ad. ♀, 1 juv. ♀; Aug. 2, 1948

Flotten Lake: 8 imm.; Aug. 5 to 26, 1948

Eastern Oven-bird. *Seiurus aurocapillus aurocapillus* (Linnaeus)

Flotten Lake Region. Rather common summer resident in aspen woodland; probably breeds. In 1948, it was recorded on July 22(1), 23(1), 24(2), 26(3), 27(1), 29(3); August 6(1), 10(5), 12(4), 14(7), 16(2), 23(1), 27(1); September 4(1).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 8 imm.; July 28 to Aug. 14, 1948

Oven-bird. *Seiurus aurocapillus* subsp.

Cypress Hills Region. In 1948, this species was not uncommon in the aspen forests of the upper Cypress Hills. Observed on June 3(3), 4(3), 5(1), 11(1), 14(2), 18(1), 22(1), 28(4), 29(4); July 2(3), 5(1). On July 28, an adult was noted carrying food. Bent (1908) and party did not record it, nor did Taverner and Laing in 1921, nor Young in 1926. Potter in a letter to Taverner dated August 30, 1938, wrote "Ovenbird June 7, not seen or heard before". Mitchell (1942) said that it had been noted in Cypress Hills, but gave no further information. Bard (MS.) collected a male on May 31, 1934, in Cypress Hills.

Specimens, National Museum of Canada:

Cypress Hills: 1 ad. ♂; June 28, 1948

Rand (1948) comments on the greyer green coloration of 3 adults from the Alberta side of Cypress Hills as compared with 3 Ontario birds. Inasmuch as his specimens are very worn, however, he apparently wisely refrained from referring them to *S. a. cinereus* Miller. Our specimen, much less worn, is quite different, closely resembling eastern birds. However, there is so much variation in this small series that it seems advisable to await an opportunity to examine additional material before attempting to decide their subspecific status.

Grinnell Water-thrush. *Seiurus noveboracensis notabilis* Ridgway

Cypress Hills Region. Migrant. Bent (1908) records the taking of an adult male in the Maple Creek timber, June 8, 1906, in a wave of migrants. Taverner on August 10, 1920, saw one near Bigstick Lake.

Flotten Lake Region. In 1948, this species was found mainly in alder-willow tangles of lake and stream edges throughout the region, as follows: July 27(4), 30(1); August 2(1), 4(1), 6(1), 7(2), 12(1), 13(1), 28(4), 30(10), 31(4); September 1(6). Latest song on August 12.

Specimens, National Museum of Canada:

Flotten Lake: 3 imm.; July 27 to Aug. 28, 1948

Connecticut Warbler. *Oporornis agilis* (Wilson)

Flotten Lake Region. Most of the warblers of this genus that were observed well enough to be identifiable were *philadelphia*. An immature specimen of *agilis* was observed on August 16, 1948, our only certain record.

Specimen, National Museum of Canada:

Flotten Lake: 1 post-juv.; Aug. 16, 1948

Mourning Warbler. *Oporornis philadelphia* (Wilson)

Flotten Lake Region. Uncommon summer resident. Observed on August 7(1), 10(4), 11(1), 12(1), 14(2), 24(1), 26(1), 30(1).

Specimens, National Museum of Canada:

Flotten Lake: 2 imm.; Aug. 10 to 12, 1948

Macgillivray Warbler. *Oporornis tolmiei tolmiei* (Townsend)

Cypress Hills Region. Common in deciduous shrubbery of the Cypress Hills where it was noted in 1948 on June 5(7), 8(2), 9(2), 15(1), 17(1), 18(1), 22(3), 25(1), 28(2), 29(3); July 2(10), 5(12), 7(14), 13(8).

Macoun (1904) recorded it as very common in all the wooded ravines on the south side of the Cypress Hills where a nest was taken in June, 1895. Bent (1908) said that Bishop found it common in families from July 25 to 30, 1906. Taverner and Laing in 1921 regarded it as quite common in the shrubbery of coulées at both Cypress Lake and Eastend. Young in 1926 recorded it regularly in small numbers. Bard (MS.) took a nest with 2 eggs on June 12, 1934.

Specimens, National Museum of Canada:

Cypress Lake: 5 ad. ♂, 1 ad. ♀; May 31 to June 10, 1921

Eastend: 4 ad. ♂; June 17 to 20, 1921

Cypress Hills: 11 ad. ♂, 3 ad. ♀; June 8 to 18, 1926; June 5 to July 5, 1948

Phillips (1947) has described four races of the Macgillivray warbler. The postulated ranges of races in Canada are: *O. t. tolmiei*, southern coastal British Columbia; *O. t. intermedia*, northern British Columbia and southward; and *O. t. austinsmithi*, southeastern British Columbia east to southwestern Saskatchewan. *O. t. austinsmithi* is said to have darker and greyer green upper parts and paler, greener under parts than *tolmiei*. *Intermedia* is said to be intermediate in colour.

Comparison of 11 adult males, taken in 1948 (June 5 to July 5) from the Saskatchewan side of the Cypress Hills, with a series of 9 taken in the same region in 1921 and 1926 (June 3 to 20), reveals a serious amount of fading in the yellow under parts of the latter. All of the 1948 series are readily distinguishable from all but 3 of the old series by the brighter, deeper yellow under parts of the recently-taken series. Two of these 3 closely approach the 1948 birds and the other matches them. Such colour changes in older skins must be taken into consideration in comparing the under parts of these birds with those of other populations.

Five adult males from coastal southern British Columbia (June and July, 1916 and 1922) average slightly more yellowish dorsally and the under parts are of darker yellow than in the older of the Cypress Hills series, although there is considerable overlapping of these characters. The same British Columbia series differs similarly above from the 1948 Cypress Hills series, but the under parts of the coastal British Columbia birds are duller, with considerably less, instead of more, orange yellow than in the fresh series from Cypress Hills.

Measurements given by Phillips (loc. cit.) for *monticola*, which breeds from southeastern Oregon and southwestern Wyoming south to central Arizona and New Mexico, indicate that that race is separable from other populations by its relatively long tail, normally 56.5 mm. or more in length.

Measurements of 10 Cypress Hills, Saskatchewan, adult males are (in mm.): wing, 57.5-62.0 (av. 60.4), tail, 50.0-55.0 (52.1) with a difference of 8.3 mm. between the averages of wing and tail measurements. Tail measurements given by Rand (1948) for coastal southern British Columbia examples are similar (53.8).

In the material examined in the present connection there appears to be considerable overlapping in colour characters. For the present, at least, it seems best, therefore, to recognize only *Oporornis tolmiei monticola* and the nominate race *Oporornis tolmiei tolmiei*. Canadian specimens are all referred, therefore, to the latter.

Northern Plains Yellow-throat. *Geothlypis trichas campicola* Behle and Aldrich

Cypress Hills Region. Very common summer resident in shrubbery throughout the Cypress Hills and on the plains along rose bush and other shrub margins of water on the plains; breeds. Noted on June 3(4), 4(4), 5(6), 6(3), 7(2), 8(7), 9(3), 10(8), 11(5), 12(4), 13(4), 14(3), 15(2), 16(2), 17(8), 18(6), 19(8), 20(5), 21(2), 22(11), 23(6), 24(14), 25(5), 26(8), 28(6), 29(8), 30(4); July 2(14), 5(16), 7(16), 12(3), 13(5).

Flotten Lake Region. This species was considerably less common here than in the Cypress Hills region, but it occurs throughout the region in tall and short shrubbery. Noted on July 19(3), 23(6), 24(1), 30(6), 31(1); August 3(2), 4(1), 6(1), 12(4), 28(2), 29(1), 30(4), 31(1); September 1(6), 4(1).

Specimens, National Museum of Canada:

Cypress Lake: 4 ad. ♂, 1 ad. ♀; May 31 to June 6, 1921

Eastend: 1 ad. ♂; June 20, 1921

Flotten Lake: 1 ad. ♀, 6 imm.; July 30 to Sept. 1, 1948

Cypress Hills: 9 ad. ♂, 2 ad. ♀; May 26, 1926, and June 5 to July 7, 1948

Long-tailed Chat. *Icteria virens auricollis* (Lichtenstein)

Cypress Hills Region. In an extensive stand of dense shrubbery, *Amelanchier*, *Prunus*, and *Crataegus*, on the lower north slope of Cypress Hills, southwest of Maple Creek, 2 chats were noted on June 19, 1948. Two were observed there again on June 26 and an adult male was collected. The male was singing and its behaviour strongly suggested that it was breeding. Most observations of this species in Saskatchewan have been made in the valley of Frenchman River and there are few records for the north side of the Cypress Hills. Soper (1942) gives an excellent history of this species in Saskatchewan.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂; June 3, 1921

Maple Creek (9 miles southwest): 1 ad. ♂; June 26, 1948

Wilson Warbler. *Wilsonia pusilla pusilla* (Wilson)

Flotten Lake Region. Near Flotten Lake in willow or alder shrubbery, it was observed in 1948, as follows: August 11(1), 16(3), 20(1).

Specimens, National Museum of Canada:

Flotten Lake: 2 post-juv. ♂; Aug. 11 to 20, 1948

Canada Warbler. *Wilsonia canadensis* (Linnaeus)

Flotten Lake Region. Observed in alder and willow tangles, as follows: August 7(1), 9(2), 11(1).

Specimens, National Museum of Canada:

Flotten Lake: 4 imm.; Aug. 7 to 11, 1948

American Redstart. *Setophaga ruticilla* (Linnaeus)

Cypress Hills. In 1948, this species was observed only once—a year-old male, by MacDonald, in the dense shrubbery of a coulée 15 miles south of Maple Creek village. Bent (1908) noted a few in Maple Creek timber on May 29, 1905, and says that one was taken there on June 8, 1906. Taverner and Laing in 1921 saw one on June 9, and on the following date at Cypress Lake he collected a year-old male. Young in 1926 saw 2 on May 26; on June 1(1), 21(2), 22(1), 24(1), 26(1); July 3(1), 8(3).

Flotten Lake Region. Only fairly common, but observed throughout the region as follows: July 30(2); August 6(4), 9(1), 11(3), 12(3), 20(1), 27(1), 31(4); September 6(2).

Specimens, National Museum of Canada:

Maple Creek (15 miles south): 1 year-old ♂; July 7, 1948

Cypress Lake: 1 year-old ♂; June 10, 1921

Flotten Lake: 3 imm.; Aug. 7 to 27, 1948

English Sparrow. *Passer domesticus domesticus* (Linnaeus)

Cypress Hills Region. Potter (1930) stated that he first observed this species at his ranch at Eastend on October 6, 1907. Taverner in 1921 made no mention of it, but Young in 1926 recorded 20 on June 9 and 50 on July 8. In 1948 it was observed locally throughout the region where there were buildings and at almost all ranches and plantations on the plains. It breeds commonly. A nest was noted in a deserted nest of the magpie on June 16. The bird was observed on June 3(50), 4(60), 7(12), 8(20), 10(23), 15(35), 16(8), 17(2), 19(8), 21(12), 24(30), 26(12), 28(11); July 2(6), 3(20), 5(10), 7(30), 12(28), 13(6).

Flotten Lake Region. Very common breeder at Meadow Lake, but it was not observed north of the settlement near Dorintosh.

Bobolink. *Dolichonyx oryzivorus* (Linnaeus)

Cypress Hills Region. A local summer resident in 1948. In the hay fields at the north base of Cypress Hills, 2 miles south of Maple Creek village, 3 bobolinks were seen on June 16, and on June 24 a single bird was noted there. Four were observed in the lush marshes of Frenchman River a mile below Cypress Lake dam on June 17.

Macoun (1903) recorded a few at the east end of Cypress Hills in June 1894. Bent (1908) recorded a single bird at Crane Lake, June 13, 1905. Taverner and Laing in 1921 saw about 6 at Cypress Lake on May 31 and one on June 7. Potter (1924) stated that it is a rare bird near Eastend, but that in June 1923 about 6 pairs nested in a low-lying meadow there.

Specimens, National Museum of Canada:

Maple Creek (2 miles south): 1 ad. ♂; June 16, 1948

Western Meadowlark. *Sturnella neglecta neglecta* Audubon

Cypress Hills Region. In open country where grass is sufficiently tall to be adequate for its needs this species is common. It was found in such areas both in the Cypress Hills and on the plains, but over large areas of the dry short-grass plains it is uncommon, often absent. Near the open areas of the lower slopes and damper grassy plains surrounding the Hills it was common; breeds. In 1948, it was observed on June 3(8), 4(6), 5(1), 7(24), 8(4), 9(2), 10(9), 11(9), 12(10), 13(18), 14(7), 15(35), 16(16), 17(23), 19(20), 20(4), 21(20), 22(15), 23(7), 24(18), 26(14), 28(5), 29(3), 30(9); July 2(5), 3(25), 5(6), 7(5), 8(30), 12(12), 13(6). Bent (1908), Taverner and Laing in 1921, and Young in 1926 also found this species very common. Young found a nest on May 18, the 4 eggs of which hatched on May 22. Potter (1930) stated that it "occasionally contrives to winter" near Eastend.

Flotten Lake Region. In the fields about settlement between Dorintosh and Meadow Lake this bird was recorded on July 19(4) 30(2).

Specimens, National Museum of Canada:

Robsart (5 miles west): 1 ad. ♂; June 17, 1948

Piapot: 2 ad. ♂; June 15, 1948

Maple Creek: 1 ad. ♂; June 8, 1948

Rathbun (1917) separated Pacific Coast (southwestern British Columbia and northwestern Washington, south to northwestern Oregon, and east to the Cascade Mountains) birds as *S. n. confluenta*, on the basis of darker dorsal coloration, but this race has received little recognition.

The National Museum has 36 adult males in spring plumage. Of these, 14 are from southern British Columbia (Midway, 1; Penticton, 1; Elko, 2; Trail, 2; Vaseaux Lake, 1; Agassiz, 1; Chilliwack, 1; Comox, 3; Brackendale, 1; Lillooet, 1), and 22 are from Alberta (Medicine Hat, 3; Milk River, 2; Lac la Nonne, 1), Saskatchewan (Indian Head, 2; Cypress Hills region, 4; Kutawagon Lake, 1; Regina, 1) and Manitoba (Shoal Lake, 3; Swan River, 3; Dauphin, 2). All 14 of the British Columbia series are readily separable from all but 2 of the Prairie Provinces birds by their darker upper parts, the former having more intensively and extensively black areas and darker brown areas. The dark barring of wings and tail averages blacker and broader in the British Columbia birds, the light interspaces darker. Thus, of 36 adult males only 2 offer difficulties. One (Shoal Lake) is intermediate in coloration, the other (Lac la Nonne, June 7) looks more like the British Columbia series, but probably is aberrant. However, 94 per cent are easily separable. Breeding females are separable by the same characters.

The differences do not appear to be attributable to unduly more rapid wear and fading of the prairie birds (specimens taken from April to July are included in the series). Moreover, birds in fresh autumn plumage, of which 5 were available from British Columbia and 7 from the Prairie Provinces, show the same relative differences. The British Columbia series is darker dorsally with the blacks more extensive, browns darker, and pale areas (median stripe and feather edges on nape and back) buffier, less whitish. *S. n. confluenta*, therefore, appears to be a perfectly valid race, extending east at least to Elko, in southeastern British Columbia.

Cypress Hills birds are, of course, referable to *S. n. neglecta*.

Yellow-headed Blackbird. *Xanthocephalus xanthocephalus* (Bonaparte)

Cypress Hills Region. Very local summer resident about larger sloughs and lake edges on the plains and in the treeless depression (The Gap) between the east and west blocks of the Cypress Hills. Observed in 1948 on June 7 (106 at Bigstick Lake), 13(18), 17(20), 30(12); July 3(12), 8(4).

Macoun (1903) recorded 4 sets of eggs taken at Crane Lake, on June 8, 1894 (it was not found there in 1948). Bent (1908) recorded it as very abundant. Taverner and Laing, in 1921, noted a great nesting colony at the east end of Cypress Lake and the former recorded 500 on June 9. There was still a colony there in 1948, but apparently only a small one as only 20 were seen by us. Young, in 1926, recorded 50 on June 9. Apparently this species has suffered during the drought years in the region.

Flotten Lake Region. Noted only once, an adult and 3 immatures at Meadow Lake on July 20, 1948.

Specimens, National Museum of Canada:

Cypress Lake: 5 ad. ♂; May 23, 1921 and June 17, 1948

Giant Red-wing. *Agelaius phoeniceus arctolegus* Oberholser

Cypress Hills Region. Common but local summer resident. Abundant in the marshes of sloughs and lakes on the plains, less common about ponds in the upper Cypress Hills; breeds. In 1948, it was noted on June 3(14), 4(8), 7(125, Bigstick Lake), 8(2), 10(2), 11(2), 13(30), 15(28), 16(10), 17(40), 18(1), 19(9), 20(3), 21(14), 23(6), 24(30), 26(12), 28(2), 30(18); July 2(6), 3(12), 6(8), 7(2), 8(20), 12(1).

Flotten Lake Region. Common in suitable marshes throughout the region. Noted on July 19(12), 23(15), 24(42), 27(7), 29(4), 30(40), 31(2); August 2(2), 3(35), 4(4), 5(2), 6(3), 9(2), 10(5), 11(1), 16(3), 19(2), 20(2), 25(2).

Specimens, National Museum of Canada:

Cypress Lake: 4 ad. ♂; 1 ad. ♀; June 3 to 7, 1921 and June 17, 1948

Cypress Hills: 8 ad. ♂, 2 ad. ♀; June 30 to July 6, 1948

Maple Creek: 1 ad. ♂; June 19, 1948

Robsart: 1 ad. ♂; June 17, 1948

Flotten Lake: 2 ad. ♂, 1 juv.; Aug. 3 to 12, 1948

Ten adult males from the Cypress Hills measure (in mm.): wing, 117-135 (av. 125.9); exposed culmen, 21-25 (23.3). Two adult males from Flotten Lake measure: wing, 129-130.5; exposed culmen, 24.

Baltimore Oriole. *Icterus galbula* (Linnaeus)

Cypress Hills Region. Although no specimens were secured, MacDonald and the writer clearly saw an oriole of this species in large poplars a few miles south of Maple Creek on June 8. Two others were observed in a grove of planted trees north of Maple Creek on June 16. Bent (1908) recorded sight records of 2 or 3 of this species in both 1905 and 1906. Laing, on June 8, 1921, saw 2 orioles at Cypress Lake that he thought were this species. Potter (1938) recorded it breeding near Eastend.

Flotten Lake Region. In 1948, this species was observed near Meadow Lake on July 18(4), 19(3); at Dorintosh on July 23(1); and at Flotten Lake on August 9(1).

Bullock Oriole. *Icterus bullockii* (Swainson)

Cypress Hills Region. Bent (1908) recorded the taking of a male of this species near Maple Creek on July 2, 1906. This bird apparently is a hybrid with *galbula* judging by the description given. Potter (1943a) recorded a sight record at Eastend on May 27, 1937, and the taking of a young bird from the nest on July 10, 1937. Farley M. Mowat secured a specimen in the region in 1939. Our only 1948 record was a sight one by MacDonald at Maple Creek on June 2.

Rusty Blackbird. *Euphagus carolinus* (Müller)

Flotten Lake. Fairly common in alder and willow in bogs, and lake and stream margins throughout the region. No actual evidence of nesting but probably does so. Observed on July 24(6), 26(2), 27(9), 28(2); August 3(2), 7(7), 10(18), 12(17), 13(5), 14(3), 16(4), 20(5), 26(6), 27(1), 28(3), 29(5), 30(10), 31(6); September 1(30), 2(4), 4(2).

Specimens, National Museum of Canada:

Flotten Lake: 1 ad. ♂, 7 imm. ♂, 3 imm. ♀, 5 unsexed; July 27 to Sept. 1, 1948

Brewer Blackbird. *Euphagus cyanocephalus* (Wagler)

Cypress Hills Region. Common about moist grassy areas where there are trees or tall shrubs in the vicinity. Much commoner at the foot of Cypress Hills than on the top; breeds. In 1948, it was observed on June 3(10), 4(7), 8(11), 10(12), 13(11), 15(6), 16(10), 17(6), 19(15), 21(12), 23(1), 24(7), 26(12), 28(10); July 2(8), 3(10), 5(6), 8(15), 12(13), 13(2). First flying juvenals on June 16. Bent (1908) found it very abundant in timber along the creeks. Taverner and Laing, in 1921, found it fairly common at Cypress Lake and Eastend, as also did Young in 1926.

Flotten Lake Region. Common in the vicinity of Meadow Lake, decreasing northward to Dorintosh, north of which it was not observed. As many as 92 were counted at Meadow Lake in one day (August 13), and on September 4, 20 were seen there.

Specimens, National Museum of Canada:

Cypress Lake: 2 ♂; June 1 to 2, 1921

Maple Creek: 2 ad. ♂, 1 ad. ♀, 1 juv.; June 16, 1948

Bronzed Grackle. *Quiscalus quiscula versicolor* Vieillot

Cypress Hills Region. In 1948, this species was observed only once; a nest on June 2 at Maple Creek and 2 adults noted. Bent (1908) recorded it as uncommon in the timber of Maple and Skull Creeks. Spreadborough (MS.) saw a single bird at the east end of Cypress Hills on June 25, 1894.

Flotten Lake Region. Common throughout the region. In 1948, it was observed on July 18(10), 19(5), 22(12), 23(12), 24(22), 27(8), 30(100); August 3(12), 6(60), 10(4), 11(1), 12(2), 13(20), 16(9), 23(6), 24(4), 25(6), 26(7), 27(3), 28(4), 29(1), 30(3), 31(20); September 1(25), 2(16), 3(11), 4(4), 5(15), 6(4).

Specimens, National Museum of Canada:

Flotten Lake: 2 ad. ♂, 1 ad. ♀, 1 imm. ♀; Aug. 16 to Sept. 2, 1948

Nevada Cowbird. *Molothrus ater artemisiae* Grinnell

Cypress Hills Region. Commonest in the lower two-thirds of the Cypress Hills, scarce at highest levels, fairly common on the plains about groves of planted trees; breeds. In 1948 it was recorded on June 7(2), 8(8), 13(10), 15(2), 17(10), 19(16), 21(4), 24(14), 26(12), 28(6), 30(1); July 5(2), 7(1). Bent (1908) recorded it as very abundant on the prairies, about the ranches, and in the timber. Taverner recorded it as "more than common—abundant" in 1921 at Cypress Lake and fairly common at Eastend. Young, in 1926, noted it regularly in daily numbers varying from 1 to 20.

Flotten Lake Region. In 1948, it was most often noted from Dorintosh south, but it breeds at Flotten Lake where on August 8 a juvenal was being fed by a myrtle warbler. The species was noted on July 18(2), 23(6), 28(8), 29(1), 31(3); August 2(3), 8(1), 10(1), 12(2).

Specimens, National Museum of Canada:

Cypress Lake: 3 ad. ♂, 4 ad. ♀; May 24 to June 1, 1921
 Eastend: 1 ad. ♂; June 21, 1921
 Maple Creek (11 miles southwest): 1 ad. ♂; June 19, 1948
 Flotten Lake: 1 juv. unsexed; July 23, 1948
 Dorintosh: 1 juv. ♀; Aug. 12, 1948

Wing measurements of 5 adult males (in mm.) are: 110-116.5 (average, 113.8).

Western Tanager. *Piranga ludoviciana* (Wilson)

Flotten Lake Region. In 1948 our only record was an adult male taken in aspen-spruce forest at Flotten Lake by MacDonald on July 26.

Dexter (1922) stated that it is common at Big River and that he had seen it also at Lac la Ronge. Street (1946) has recorded the breeding of this species at Nipawin, central eastern Saskatchewan.

Specimen, National Museum of Canada:

Flotten Lake: 1 ad. ♂; July 26, 1948

Rose-breasted Grosbeak. *Pheucticus ludovicianus* (Linnaeus)

Cypress Hills Region. Macoun (1904) says that Spreadborough saw a few late in June 1894, in the Cypress Hills. Taverner observed and collected a female in willows on the north side of Cypress Lake on June 2, 1921. Potter (1943a) stated that he saw a grosbeak of this species on May 15, 1911, near Eastend and that another was reported there on June 5, 1924.

Flotten Lake Region. Fairly common summer resident. In 1948, noted mostly in the extensive aspen forest north of Flotten Lake and in the tangles of tall shrubs along Meadow River near Meadow Lake. It was recorded on July 19(2), 24(1), 28(1), 30(1); August 3(3), 11(1), 29(1). Robert P. Allen (MS.) noted its song at Flotten Lake on June 1, 1947.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♀; June 2, 1921
 Flotten Lake: 1 ad. ♀, 1 juv. ♂; July 24 to 28, 1948

Black-headed Grosbeak. *Pheucticus melanocephalus* subsp.

Cypress Hills Region. Uncommon summer resident; breeds. Bent (1908) saw a male in the Maple Creek timber on June 14, 1905, and on June 16, 1906, collected a nest with 3 eggs and the incubating male. He states that Bishop saw a pair on July 5, 1906, on Mackaye Creek and that on July 11, 1906, Dwight and Bishop took 2 adults and 2 eggs. Mitchell (1924) took a specimen at Eastend on May 27, 1917. Potter (1943a) reported seeing one at his Eastend ranch on July 25, 1926. Breeding birds, undoubtedly, are referable to *P. m. melanocephalus*, but I have examined no specimens.

Lazuli Bunting. *Passerina amoena* (Say)

Cypress Hills Region. Potter (1943a) several times saw this species in the Eastend area. He recorded a nest found at Shaunavon in 1940.

Dickcissel. *Spiza americana* (Gmelin)

Cypress Hills Region. Potter (1943a) recorded that a bird of this species remained near his house at Eastend from June 16 to July 2, 1940.

Evening Grosbeak. *Hesperiphona vespertina* subsp.

Cypress Hills Region. Winter visitor. This species was not noted by Potter (1943a) until January 4, 1929, after almost 30 years of observation. He saw it in winter on several later occasions, but gave no definite dates. A male in the Saskatchewan Provincial Museum was taken at Ravenscrag on May 22, 1925, by H. H. Mitchell.

Flotten Lake Region. C. F. Shirley showed the writer a photograph of a small flock of this species. The photograph was taken in winter at Mr. Shirley's home near Dorintosh and there can be no doubt as to the species. He says that these birds are seen in Manitoba maple trees (*Acer negundo*) frequently in winter.

Taverner Purple Finch. *Carpodacus purpureus taverneri* Rand

Flotten Lake Region. Not uncommon summer resident throughout the region. It was observed on July 19(3), 23(6), 24(4), 27(1), 30(2); August 2(1), 4(1), 5(2), 6(3), 8(1), 9(1), 10(2), 11(8), 12(2), 16(5), 23(3), 27(2), 28(5), 30(2), 31(6); September 1(3), 2(1), 4(4), 6(2).

Specimens, National Museum of Canada:

Flotten Lake: 4 imm.; Aug. 11 to 27, 1948

This race, recently described by Rand (1946), is very well marked in the adult male and appears to be perfectly valid.

Pine Grosbeak. *Pinicola enucleator* subsp.

Cypress Hills Region. Potter (1925) refers to the presence of the species near Eastend in winter. There is a December-taken specimen in the Saskatchewan Provincial Museum marked "Cypress Hills".

Grey-crowned Rosy Finch. *Leucosticte tephrocotis tephrocotis* (Swainson)

Cypress Hills Region. Winter visitor. Potter (1943a) says that rosy finches are irregular winter visitors; sometimes appearing in large flocks, or again entirely absent for several seasons. Most individuals apparently are *tephrocotis*. Mitchell (1924) recorded specimens taken by Potter at Eastend on November 26, 1921, and January 20, 1922. The writer examined a specimen in the Saskatchewan Provincial Museum, which was collected by S. A. Mann on January 11, 1940, at Skull Creek near Piapot.

Hepburn Rosy Finch. *Leucosticte tephrocotis littoralis* Baird

Cypress Hills Region. A letter dated March 7, 1933 (National Museum files), from H. H. Mitchell to P. A. Taverner reads "... we have just recently received a specimen of Hepburn's Rosy Finch *L. t. littoralis*. It was taken by Spencer Pearse at Ravenscrag, Sask., on March 1, 1933. Fortunately the head and neck are not damaged and it is distinctly *littoralis*. Pearse writes that he saw several others of this form with small flocks of *tephrocotis*". Potter (1943) recorded this specimen. It is in the Saskatchewan Provincial Museum, and was examined by the present writer. An interesting account of the occurrence of rosy finches in Saskatchewan is that of Potter (1935).

Redpoll. *Acanthis* sp.

Cypress Hills Region. Redpolls not further identified have been recorded in Christmas censuses by Potter and Mann.

Northern Pine Siskin. *Spinus pinus pinus* (Wilson)

Cypress Hills Region. In 1948, this was a common summer resident in the coniferous forest of the higher Cypress Hills. Occasionally it was noted on the lower Hills and on June 12, 4 were observed, one post-juvenal. collected in dense deciduous shrubbery $2\frac{1}{2}$ miles south of Maple Creek village. Although immature birds were on the wing, some breeding appeared to be taking place, judging from the condition of several adults taken. The species was recorded on June 4(21), 8(8), 12(2), 16(2), 17(16), 18(1), 25(2), 28(6), 29(10), 30(2); July 1(5), 2(2), 3(4), 5(3), 7(5), 12(29). Bent (1908) recorded one taken by Bishop in the Maple Creek timber on July 2, 1906, and says that Bishop saw and heard occasional birds in Cypress Hills. Taverner and Laing, in 1921, several times noted a flock in willows at Cypress Lake and saw 6 at Eastend on June 25, one of which was a juvenal, probably hatched nearby.

Flotten Lake Region. An abundant summer resident in coniferous forest throughout the region; breeds. It was noted on July 17(10), 18(18), 19(7), 23(12), 24(20), 26(128), 27(52), 28(35), 29(50), 30(6), 31(36); August 2(30), 3(16), 4(25), 5(75), 6(12), 7(18), 9(130), 10(62), 11(47), 12(2), 14(19), 16(33), 18(15), 19(20), 20(20), 21(10), 22(5), 23(7), 24(10), 25(4), 26(14), 27(17), 28(12), 29(4), 31(5); September 2(8), 4(25), 6(40). Although immatures of differing ages were collected on July 29, August 2

and 11, courtship and nesting were still going on. In a sparse jack pine woods two nests were located 50 feet apart, one of which on July 31 had 4 day-old young; the other, fresh eggs.

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂, 1 ad. ♀; June 1, 1921

Eastend: 1 juv. ♂; June 25, 1921

Cypress Hills: 1 ad. ♂, 1 ad. ♀; July 1, 1948

Maple Creek (2½ miles south): 1 juv. ♀; July 12, 1948

Flotten Lake: 6 ad. ♂, 6 ad. ♀, 3 imm.; July 23 to Aug. 21, 1948

The Flotten Lake series averages fully as dark as 6 in comparable plumage from Lake Mistassini and Percé, Quebec. The series from the Cypress Hills region averages paler, but is less worn. An adult female from the Saskatchewan side of the Cypress Hills is very pale; one from the Alberta side, taken in 1945, in strictly comparable plumage, is very dark, indicating that there may be much individual variation in populations from the same general locality.

Pale Goldfinch. *Spinus tristis pallidus* Mearns

Cypress Hills Region. Fairly common about forest edges, sparse deciduous forest, and tall shrubbery of coulées. Less common in the higher Cypress Hills. Recorded in 1948 on June 8(1), 9(1), 10(15), 11(1), 12(1), 17(4), 19(3), 22(1), 23(4), 24(15), 25(2), 26(7), 28(4), 29(4); July 2(2), 3(1), 5(8), 7(6), 12(6), 13(7). It was recorded in the region by Macoun (1904) and Bent (1908), and was noted by Taverner and Laing in 1921, and by Young in 1926, in numbers similar to those noted in 1948.

Flotten Lake Region. Observed only about the settled country between Meadow Lake and Dorintosh where it was recorded, as follows: July 19(3), 23(10), 30(1); August 13(3).

Specimens, National Museum of Canada:

Cypress Lake: 4 ad. ♂, 1 ad. ♀; June 1 to 10, 1921 and June 17, 1948

Eastend: 1 ad. ♂; June 20, 1921

Cypress Hills: 1 ad. ♂; July 7, 1948

Maple Creek (12 miles southwest): 1 ad. ♂; June 19, 1948

Wing measurements of 7 adult males (in mm.) are: 72.5 to 75 (average 73.8); of 1 ad. female, 70.6.

White-winged Crossbill. *Loxia leucoptera leucoptera* Gmelin

Cypress Hills Region. Mitchell (1923) took this species in the coniferous forest of the Cypress Hills on July 6, 1921. Apparently there are no other recorded observations.

Flotten Lake Region. In 1948, this species was common and breeding in coniferous forests throughout the region. It was noted south to a point 12 miles south of Meadow Lake where 2 were observed on July 17 in an extensive aspen forest. Although an immature female, taken on July 24, had the skull almost completely ossified, a juvenal recently out of the nest and still being fed by the male parent was taken by MacDonald on August 23. Singing males were frequently heard throughout the period we spent there. The species was observed on July 17(2), 23(2), 24(7), 26(38),

27(4), 28(3), 29(37), 31(42); August 2(12), 3(3), 4(6), 5(11), 7(16), 9(12), 10(36), 11(14), 12(4), 14(9), 16(8), 19(6), 23(8), 24(1), 25(9), 26(3), 27(20), 28(5), 30(2), 31(6); September 2(8), 4(24), 6(10).

Specimens, National Museum of Canada:

Flotten Lake: 6 red males, 2 juv.; July 23 to Aug. 23, 1948

Bendire Crossbill. *Loxia curvirostra bendirei* Ridgway

Cypress Hills Region. In 1948, common throughout the coniferous forest of the higher Cypress Hills where it was observed, as follows: June 3(8), 4(10), 5(60), 6(12), 7(11), 8(16), 9(11), 10(4), 11(16), 12(7), 13(6), 14(9), 15(5), 16(5), 17(8), 18(14), 20(6), 21(20), 22(8), 23(6), 24(8), 25(9), 26(3), 28(7), 29(20), 30(16); July 2(9), 5(4), 7(12), 12(8).

Although no actual proof of breeding has been obtained, several juvenals taken by us in 1948 have not begun to assume post-juvenal plumage and one has a culmen of only 15.0 mm. The gonads of some of the males taken appeared to be in breeding condition and singing males were several times noted.

The writer finds evidence of the occurrence of this crossbill in the Cypress Hills in at least 9 years, as follows: June, 1894 and 1895 (Macoun, 1904); May 31, 1905, 6 recorded by Brent (1908); June 5, 1908, specimen recorded by Griscom (1937); May 12 to July 22, 1921, small bands and more rarely in pairs (Mitchell, 1923); June 16, 1921, 2 seen by Taverner (MS.) and Laing near Eastend; May 25 to June 9, 1934, 8 specimens in Saskatchewan Provincial Museum taken by Fred G. Bard; August 1939 specimens in Royal Ontario Museum of Zoology (James L. Baillie, oral); June 29 to July 13, 1945, fairly common on Alberta side of Cypress Hills (Rand, 1948) and presumably occurring also on the Saskatchewan side; 1948, common as observed by us (See above).

Specimens, National Museum of Canada:

Cypress Hills: 10 ad. ♂, 1 sub-ad. ♂, 3 ad. ♀, 3 juv. ♂, 3 juv. ♀; June 4 to 29, 1948

Although tentatively referred to *bendirei*, the stout blunt bills of our 1948 series differ markedly from a series of *bendirei* from British Columbia in the National Museum of Canada; also from topotypes of the relatively slender-billed *benti* in the Museum of Zoology, University of Michigan. Additional studies of the Cypress Hills series are being undertaken.

Green-tailed Towhee. *Chlorura chlorura* (Audubon)

Cypress Hills Region. A female in somewhat worn plumage was collected by C. F. Holmes, at Cloverley, near Dollard on May 18, 1944 (Rand, 1945). This is the only record for the region and the third for Canada.

Arctic Towhee. *Pipilo maculatus arcticus* (Swainson)

Cypress Hills Region. In 1908, this species was not common, but was found in dense deciduous shrubbery in both the upper and lower Cypress Hills; breeds. It was recorded on June 17(1), 19(3), 22(1), 24(3), 26(3), 28(1); July 7(1), 12(1), 13(9) at well-distributed localities, but was most common on upper Fairwell Creek, where 9 were noted on July 13.

Macoun (1904) recorded 2 nests from the Cypress Hills located in late June 1895; Bent (1908) found it uncommon in Maple Creek and Skull Creek timber; Taverner and Laing noted it as fairly common in 1921 at Cypress Lake and Eastend; Young, in 1926, saw singles on May 26 and June 5.

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂; June 3, 1921

Eastend: 1 ad. ♂; June 18, 1921

Cypress Hills: 5 ad. ♂; June 24 to July 13, 1948

Lark Bunting. *Calamospiza melanocorys* Stejneger

Cypress Hills Region. In 1948, this was locally a common bird of the plains where taller grass, sagebrush, rose bushes, or other short shrubs were available for cover. In extensive treeless areas of the upper Cypress Hills, where shrubby cinquefoil (*Potentilla fruticosa*) replaces sagebrush (*Artemisia*) of the plains below, it appears to be uncommon and was noted on only four dates, single birds being seen on June 12, 22, and 23, and 2 on July 7. On the plains at the base of and surrounding Cypress Hills, this species was noted on June 3(12), 4(7), 7(40), 8(20), 10(1), 13(60), 15(10), 16(6), 17(40), 19(32), 21(120), 24(6), 26(25), 30(3); July 3(35), 8(95).

Macoun (1904) found it common and breeding late in May 1894. Bent (1908) and party did not certainly record it in 1905, but found it common in 1906. Taverner and Laing, in 1921, found it locally fairly common on the plains south of Cypress Hills, and Taverner observed a male between Wapashoe and Piapot on August 10, 1920.

Specimens, National Museum of Canada:

Crane Lake: 1 ad. ♂; June 10, 1894

Wapashoe: 1 ad. ♂; Aug. 10, 1920

Cypress Lake: 3 ad. ♂; May 24 to June 7, 1921

Robsart: 4 ad. ♂; June 17, 1948

Maple Creek: 1 ad. ♂; June 10, 1948

Nevada Savannah Sparrow. *Passerculus sandwichensis nevadensis* Grinnell

Cypress Hills Region. Common and breeding on moister and grassier parts of the plains in depressions, along creeks, marshes, and lake edges; also in the extensive treeless areas throughout Cypress Hills. Recorded on June 3(9), 4(3), 7(45), 8(10), 9(10), 10(2), 11(15), 12(16), 13(25), 14(14), 15(20), 16(8), 17(16), 19(10), 20(20), 21(13), 22(12), 23(17), 24(20), 26(12), 28(2), 29(3), 30(12); July 2(4), 3(20), 5(7), 7(10), 8(12), 13(7).

Flotten Lake Region. Not uncommon in grassy and brushy clearings about settlement north to Dorintosh, north of which it is found mainly about muskegs, marshy edges of streams and lakes. It was recorded on July 19(4), 27(1), 30(8); August 2(6), 3(1), 6(1), 13(1), 16(1), 22(2), 24(2), 26(4), 31(3); September 1(1), 2(26), 4(8), 6(6).

Specimens, National Museum of Canada:

Cypress Lake: 3 ad. ♂, 2 ad. ♀; May 23 to June 7, 1921

Cypress Hills: 14 ad. ♂, 3 ad. ♀, 1 juv. ♂; June 9 to July 7, 1948

Piapot: 1 ad. ♂; June 15, 1948

Flotten Lake: 3 ad. ♂, 2 ad. ♀, 11 imm.; July 27 to Sept. 4, 1948

Matheson Lake: 1 ad. ♂; Aug. 3, 1948

Although the Flotten Lake adults are a little darker and browner than those from Cypress Hills, they are more worn and are similar to specimens of *nevadensis* in comparable state of wear from Last Mountain Lake. The autumn-plumaged birds differ from similar material of *anthinus* from southern Yukon in their paler, less brownish coloration, and are much paler than autumn specimens of *oblitus*.

Baird Sparrow. *Ammodramus bairdii* (Audubon)

Cypress Hills Region. In 1948, this species was rather uncommon. At Crane Lake on June 15, 9 were noted near the water's edge in manna grass (*Glyceria*) and in *Juncus-Scirpus* associations. It was observed also in grassy depressions on the plains, and in similar places well up in the Cypress Hills and in the broad treeless area between the west and east blocks of the Cypress Hills (The Gap). It was observed on June 3(2), 15(14), 19(3), 23(2), 30(2); July 3(5), 7(3).

Bent (1908) recorded this sparrow as uncommon, but his party located a number of pairs in grassy hollows on the prairie. Taverner, in 1920, noted it August 9 to 11 at Bitter, Bigstick, and Crane Lakes, and Taverner and Laing, in 1921, found it local, but not uncommon, at Cypress Lake.

Specimens, National Museum of Canada:

Cypress Lake: 4 ad. ♂; May 24 to June 7, 1921

Cypress Hills: 1 ad. ♂; June 19, 1948

Piapot: 1 ad. ♂; June 15, 1948

Leconte Sparrow. *Passerherbulus caudacutus* (Latham)

Flotten Lake Region. This sparrow was noted in a variety of habitats near Flotten Lake. On July 23, 2 singing males and another were noted in a broad expanse of reed grass (*Calamagrostis inexpansa*); several times in the bulrush edges of small woodland ponds; and several times along an abandoned, dry, sandy road where a species of *Carex* was the most conspicuous plant. This sparrow was noted on July 23(3), 26(1), 28(2), 29(10), 31(3); August 2(3), 5(1), 10(2), 11(2), 12(5), 14(1), 16(1), 24(1).

Specimens, National Museum of Canada:

Flotten Lake: 4 ad. ♂, 9 imm.; July 23 to August 16, 1948

[Nelson Sparrow. *Ammodramus caudacuta nelsoni* (Allen). *Cypress Hills Region.* On July 8, at dusk, the writer heard for several minutes the song of 2 birds of this species in the marshes immediately below the dam at the east end of Cypress Lake. This species apparently has not previously been recorded from the region.]

Western Vesper Sparrow. *Pooecetes gramineus confusus* Baird

Cypress Hills Region. Common and rather generally distributed on the open plains and in most of the treeless areas at all levels of the Cypress Hills; breeds. Observed on June 3 (7), 4(1), 7(8), 8(5), 9(4), 10(8), 11(7), 12(7), 13(8), 14(10), 15(30), 16(16), 17(30), 19(23), 20(4), 21(25), 22(9), 23(4), 24(12), 26(6), 28(6), 29(3), 30(6); July 2(4), 3(10, a nest contained well-developed young), 5(6), 7(12), 8(23), 12(5), 13(12).

Flotten Lake Region. In the cleared fields from Dorintosh south, this bird was common, but was much scarcer in the openings in the forested country between Dorintosh and Flotten Lake. This sparrow was recorded on July 19(4), 23(8), 29(2), 30(15); August 2(3), 3(15), 6(24), 12(1), 20(1), 24(1), 31(4); September 2(4), 3(30), 4(7), 6(6).

Specimens, National Museum of Canada:

Wapashoe: 2 ad. ♂; Aug. 10, 1920
 Cypress Lake: 1 ad. ♂, 1 ad. ♀; June 10, 1921
 Eastend: 1 ad. ♀; June 16, 1921
 Robsart: 1 ad. ♂, 1 ad. ♀; June 17, 1948
 Maple Creek and Piapot: 2 ad. ♂, 2 ad. ♀; June 10 to 19, 1948
 Cypress Hills: 4 ad. ♂, 2 ad. ♀; June 9 to 29, 1948
 Flotten Lake: 3 ad. ♂, 1 ad. ♀, 6 imm.; July 22 to Sept. 4, 1948

Western Lark Sparrow. *Chondestes grammacus strigatus* Swainson

Cypress Hills Region. Uncommon summer resident; breeds. On June 10, 1948, a female with brood patch was collected in willow shrubbery of a coulée 5 miles south of Maple Creek. Two, evidently a pair, were observed on June 21 at a plantation of balsam poplar and pea tree (*Caragana arborescens*) at an abandoned ranch house on the dry plains just north of Willow Creek near the Montana border.

Macoun (1904) recorded a pair on Sucker Creek, lower Cypress Hills, on July 1, 1895; but Brent (1908), Taverner and Laing, and Young do not seem to have noted it. Potter (1943a) said that this species is a striking example of a bird formerly uncommon that has increased with the settlement of the prairies; recorded a singing male taken by him at or near Eastend; found a nest of 5 eggs on June 17, 1940. The National Museum has a stubby-tailed nestling taken by C. F. Holmes at Whitemud from a nest containing 4 young on June 25, 1937.

Specimens, National Museum of Canada:

Whitemud: 1 juv. ♂; June 25, 1937
 Maple Creek (5 miles south): 1 ad. ♀; June 10, 1948

Slate-colored Junco. *Junco hyemalis hyemalis* (Linnaeus)

Flotten Lake Region. Very common summer resident throughout; breeds. It was recorded in 1948 on July 23(2), 24(5), 26(4), 27(1), 28(24), 29(47), 30(2), 31(13); August 2(20), 3(22), 4(17), 5(6), 6(7), 7(9), 9(6), 10(30), 11(21), 12(25), 13(3), 14(11), 16(18), 19(2), 20(1), 23(1), 26(1), 28(1); September 1(1), 2(8), 3(2), 4(1), 6(1). A nest with 5 eggs, June 11, 1947 (Robert P. Allen, MS.) recorded.

Specimens, National Museum of Canada:

Flotten Lake: 7 juv. and post-juv.; July 23 to Sept. 4, 1948

Pink-sided Junco. *Junco oreganus mearnsi* Ridgway

Cypress Hills Region. Common throughout the coniferous forest (or in willow or aspen near it) of the higher Cypress Hills; breeds. In 1948 it was recorded on June 3(2), 4(5), 5(24), 6(5), 7(4), 8(15), 9(14), 10(8), 11(17, a nest with 4 young on ground in mixed aspen-lodgepole pine forest), 12(19), 13(3), 14(10), 15(2), 16(2), 17(2), 18(7—a nest on ground in willow edge of coniferous forest; the 3 young left the nest), 20(10), 21(1),

22(25), 23(5), 24(3), 25(17, including 4 flying young), 26(4), 27(4), 28(10), 29(8; a nest on ground in coniferous woods contained 6 eggs), 30(4); July 2(10), 5(9), 7(6), 12(12).

Under the name *Junco montanus*, Macoun (1904) recorded this species breeding in June 1894 on the east end of Cypress Hills. Bent (1908) quoted Bishop who obtained a female and 2 young in Cypress Hills on July 27, 1906, and a male and one young on the following day. He noted no others. Mitchell (1923) found several nests in 1921, the earliest on May 14. Young, in 1926, recorded it daily in numbers as high as 15.

Specimens, National Museum of Canada:

Cypress Hills: 21 ad. ♂, 8 ad. ♀, 1 juv. ♂, 2 juv. ♀; May 18 to June 24, 1926, and June 5 to July 10, 1948

Western Tree Sparrow. *Spizella arborea ochracea* Brewster

Cypress Hills Region. Migrant and rare winter resident. Potter (1925) recorded about 12 near Eastend on February 12 (probably 1925). A female, taken at Seward on October 5, 1922, is in the private collection of Hoyes Lloyd. This species, undoubtedly, is a spring and autumn migrant at Flotten Lake also, but field work terminated too early in the autumn to establish this.

In addition to the Seward specimen in the Lloyd collection, the writer has examined 5 April Saskatchewan specimens from Indian Head (3), Regina, and Balgonie and one autumn bird (Indian Head, Sept. 23, 1891) in the National Museum. These are all *ochracea* and only one (Balgonie, April 7, 1939) shows slight tendencies toward *arborea*. Todd (1947) referred his only Saskatchewan specimen (Davidson, March 16, 1933) to *arborea*, but *ochracea* appears to be the commoner of the two forms in southern Saskatchewan.

Eastern Chipping Sparrow. *Spizella passerina passerina* (Bechstein)

Cypress Hills Region. Migrant. Taverner in 1921 saw a flock of 25 of this species at Cypress Lake on May 21. A specimen that he took from this flock is referable to *passerina*, which breeds farther north.

Flotten Lake Region. Common summer resident in aspen and coniferous forest edges, and tall shrubbery on margins of roads, streams, and lakes throughout the region; breeds. Observed in 1948, as follows: July 24(35), 26(12), 28(2), 29(47), 30(8), 31(15); August 2(12), 3(36), 4(35), 5(40), 6(35), 7(15), 10(6), 11(6), 12(12), 13(2), 14(8), 16(6), 20(2), 23(1), 26(8), 27(6), 28(2), 30(3), 31(4); September 1(1), 4(10), 6(2). Robert P. Allen (MS.) recorded a nest with 5 eggs on June 15, 1947, at Flotten Lake.

Specimens, National Museum of Canada:

Flotten Lake: 3 ad. ♂, 1 ad. ♀, 6 imm.; July 24 to Sept. 4, 1948

Cypress Lake: 1 ad. ♂; May 21, 1921

Breeding populations of this species from the central Prairie Provinces northward, northern British Columbia, Yukon, etc., are intermediate in coloration between *passerina* (from eastern Canada and eastern United States) and *arizonae*, with the proportions of the latter. Currently they are referred to *passerina*, but because of their size and intermediate color-

tion they might almost as well be called *arizonae*, as was done by Bishop (1900) with Yukon birds. Flotten Lake specimens, listed above, are a part of this population. For the present at least I follow current procedure in referring them to *passerina*.

Western Chipping Sparrow. *Spizella passerina arizonae* Coues

Cypress Hills Region. A common summer resident in sparse woods and wood edges of Cypress Hills, and in wooded coulées down to the plains; breeds. In 1948, it was observed, as follows: June 3(2), 4(2), 5(10), 6(2), 7(2), 8(4), 9(10), 10(6), 11(15), 12(8), 14(7), 15(2), 17(2), 18(5), 20(2), 22(9), 23(2), 24(4), 25(9, including first flying young), 26(4), 28(3), 29(5), 30(10); July 2(4), 5(8), 7(6). Two nests discovered on June 8 and 18 were both in white spruce.

Heretofore this species appears to have been considered rare here. Mitchell (1919) considered the taking of a breeding male on June 15, 1919, worthy of note. Bent (1908) found the species rare, saw 2 and collected one in Cypress Hills, May 31, 1905, and Bishop collected one on Mackaye Creek on July 11, 1906. Young, in 1926, recorded a few, no more than 4 in any one day.

Specimens, National Museum of Canada:

Cypress Hills: 1 ad. ♂; May 21, 1926
4 ad. ♂, 1 juv. ♀; June 5 to 30, 1948

The A.O.U. Check-list (1931) does not include Saskatchewan in the range of this race. The National Museum possesses no breeding material from other points in southern Saskatchewan, but Todd (1947) referred his 2 specimens from Davidson and Last Mountain Lake, respectively, to *arizonae*. That its range in the southern Prairie Provinces extends east to southwestern Manitoba is attested by a series of 10 adults from Shoal Lake and Whitewater Lake in the National Museum.

Clay-coloured Sparrow. *Spizella pallida* (Swainson)

Cypress Lake Regina. Common in rose-bush and other shrubbery in the lower Cypress Hills and in such places on the plains; breeds. In the highest parts of the Cypress Hills it appears to be scarce and was observed only in willow shrubbery. It was observed in 1948 on June 8(3), 10(2), 11(6), 12(2), 13(2), 15(8), 17(17), 19(32), 21(18), 22(1), 23(12), 24(48), 26(27), 30(2); July 5(27), 7(18), 13(4). Bent (1908) records the finding of 5 nests in one day, June 3, 1905.

Flotten Lake Region. Common in both low and tall shrubbery south of Dorintosh, but north of which, due to less favourable habitat, it was scarcer. Observed on July 19(10), 23(8), 30(28); August 4(1), 6(12), 10(2), 11(1), 13(10), 24(1).

Specimens, National Museum of Canada:

Cypress Lake: 3 ad. ♂, 2 ad. ♀; May 20 to June 10, 1921; June 17, 1948
Eastend: 1 ad. ♂; June 22, 1921
Cypress Hills: 1 ad. ♂; June 11, 1948
Maple Creek and Piapot: 5 ad. ♂, 2 ad. ♀; June 8 to 19, 1948
Dorintosh: 6 imm.; July 30 to Aug. 6, 1948
Flotten Lake: 1 post-juv. ♂; Aug. 24, 1948

Brewer Sparrow. *Spizella breweri breweri* Cassin

Cypress Hills Region. Locally not uncommon in low shrubbery on the open plains both south and north of Cypress Hills; breeds. In 1948, 8 were observed on June 15 in an extensive area of rose bushes between Crane Lake and Piapot; 3 were noted 2 miles east of Cypress Lake in rose bushes on June 17; and 18 were noted in sagebrush, 7 miles south of Govenlock on June 21, at which time a nest was discovered 8 inches above ground in a greasewood bush. There were 4 young in the nest. Mitchell (1919) found this species on June 16, 1919, evidently breeding: "Along the valley (of the Frenchman River at Eastend) we estimated there were eight to ten pairs of birds, based on males we saw and heard". He took specimens and thought that these were the first Canadian specimens from east of the Rockies, certainly the first for Saskatchewan. However, Saunders later (1920) recorded the finding by him of 2 nests and the taking of 2 specimens on June 9, 1906, at Cummings, Saskatchewan, one specimen of which is in the National Museum. Taverner and Laing, in 1921, took a nest with heavily-incubated eggs near Cypress Lake on June 4 and collected both adults, and recorded the species also at Eastend.

Specimens, National Museum of Canada:

Cypress Lake: 1 ad. ♂, 1 ad. ♀, nest and eggs; June 4, 1921
 Eastend: 2 ad. ♂; June 22, 1921
 Cummings: 1 ad. ♂; June 9, 1906
 Piapot (2 miles north): 1 ad. ♂, 2 ad. ♀; June 15, 1948
 Govenlock (8 miles south): 3 ad. ♂, 2 ad. ♀, 2 fledglings; June 15, 1948

Harris Sparrow. *Zonotrichia querula* (Nuttall)

Cypress Hills Region. Migrant. On October 7, 1922, one was identified at Bigstick Lake by Hoyes Lloyd (MS.). Several were recorded by him on the north slope of Cypress Hills on October 9, 1922, and on October 11 of the same year another was noted near Eastend by Mr. Lloyd.

Oregon White-crowned Sparrow. *Zonotrichia leucophrys oriantha* Oberholser

Cypress Hills Region. Fairly common throughout the Cypress Hills where it was noted in the thorn scrub and other tall deciduous shrubbery of forest edges and coulées down to within 5 miles of Maple Creek village; breeds. It was observed on June 5(2), 22(2, one of which was carrying food), 23(1), 25(4), 26(4, including flying juvenals), 28(3, one carrying food), 29(14); July 2(6), 5(9, 6 in coulée 5 miles south of Maple Creek village), 6(12), 7(7). On July 7, this species was feeding on the fruit of low buffalo-berry (*Shepherdia canadensis*).

Macoun (1904) recorded this species as common in the east end of Cypress Hills on June 24, 1894; Bent (1908) recorded a few in 1905 and 1906, as also did Mitchell (1919 and 1923), Taverner (1927), and Potter (1927). Young, in 1926, saw it regularly, noting as many as 20 in a day.

Specimens, National Museum of Canada:

Cypress Lake: 7 ad. ♂; May 30 to June 10, 1921
 Eastend: 2 ad. ♂; June 21-22, 1921
 Cypress Hills: 1 ad. ♂; May 24, 1926
 5 ad. ♂, 6 ad. ♀, 1 juv. ♂; June 26 to July 7, 1948

These specimens, black-lored birds, are paler than *leucophrys*. Breeding specimens from the Alberta side of the Cypress Hills have been compared by Rand (1948) with topotypical specimens of *oriantha*. Our Saskatchewan material is similar and is referred to *oriantha* also.

Gambel Sparrow. *Zonotrichia leucophrys gambelii* (Nuttall)

Cypress Hills Region. Migrant. Two specimens taken by Taverner at Cypress Lake on May 21 and 30, 1921, are of this form. They were recorded by Taverner (1927) and Rand (1948).

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♀; May 21 to 30, 1921

White-throated Sparrow. *Zonotrichia albicollis* (Gmelin)

Flotten Lake Region. Very common summer resident throughout; breeds. Noted south to Glaslyn. It was observed in 1948 on July 23(5), 24(9), 26(25), 27(17), 28(11), 29(33), 30(20), 31(15); August 2(6), 3(10), 4(17), 5(13), 6(15), 7(19), 9(12), 10(15), 11(33), 12(18), 13(7), 14(26), 16(14), 18(2), 19(10), 20(9), 21(2), 23(14), 24(4), 25(15), 26(10), 27(30), 28(20), 29(10), 30(8), 31(14); September 1(6), 2(14), 3(12), 4(10), 6(20). A nest was located on July 31.

Specimens, National Museum of Canada:

Flotten Lake: 2 ad. ♂, 4 ad. ♀, 2 juv., 8 post-juv.; July 24 to Sept. 3, 1948

Fox Sparrow. *Passerella iliaca* subsp.

Cypress Hills Region. Migrant. Potter (1943a) recorded his observation of one at or near Eastend on September 29, 1941.

Flotten Lake Region. In a dense jungle of alder, Saskatoon (*Amelanchier*), and red osier dogwood at the edge of Meadow River, near Meadow Lake, the writer heard many times on July 19 a song that he at once attributed to this species. The bird sang at intervals throughout the time that MacDonald and I searched for it, but walking was difficult and noisy and it was not until an hour and a half later that we saw it at a distance of 30 feet through 8 X binoculars. There was no mistaking its identity, but due to the moving of camp at the time collecting guns were not available. Camp was located 50 miles from this point and it was not until July 30 that we visited the area again, but without success. The species was not observed elsewhere.

Lincoln Sparrow. *Melospiza lincolni lincolni* (Audubon)

Cypress Hills Region. Migrant. Mitchell (1924) recorded specimens taken in the Cypress Hills on May 18, but gave no further data.

Flotten Lake Region. Observed in tall shrubbery along roads, bog edges, streams, and lakes throughout the region. Recorded on July 31(10); August 4(8), 5(9), 7(2), 9(2), 10(9), 11(1), 12(12), 13(2), 14(6), 16(8), 19(5), 20(2), 21(2), 23(7), 24(10), 26(6), 31(5); September 2(2), 4(4),

6(5). It probably breeds, as a specimen in juvenal plumage was taken on July 31. F. G. Bard collected an adult female on June 20, 1935, at Tamoths, south of our region.

Specimens, National Museum of Canada:

Flotten Lake: 4 juv., 8 post-juv.; July 31 to Aug. 24, 1948

Northern Swamp Sparrow. *Melospiza georgiana ericrypta* Oberholser

Flotten Lake Region. Not uncommon in alder-willow associations at bogs and along the margins of streams and lakes. Observed on July 29(2), 31(2); August 4(8), 6(3), 10(2), 12(11), 13(1), 16(1), 19(12), 23(8), 28(20), 29(14), 30(4), 31(6); September 1(17), 2(1), 4(2).

Specimens, National Museum of Canada:

Flotten Lake: 5 juv., 7 post-juv.; July 29 to Sept. 1, 1948

Dakota Song Sparrow. *Melospiza melodia juddi* Bishop

Cypress Hills Region. Fairly common summer resident in tall shrubbery throughout the Cypress Hills, perhaps commonest in the lower wooded coulées, down to the plains; breeds. Observed on June 8(3), 10(2), 13(1), 15(1), 16(1), 17(6), 19(4), 23(12, including an adult carrying food), 24(10), 26(5); July 2(2), 5(4), 7(7), 13(3). A juvenal was taken in the Cypress Hills on July 7, without much doubt hatched in the vicinity.

Macoun (1904) found a few breeding at Crane Lake, Skull Creek, and in the Cypress Hills in 1894. Bent (1908) recorded it as uncommon along Skull and Maple Creeks and in the Cypress Hills. Taverner, in 1921, noted it as only fairly common at Cypress Lake and Eastend. Young, in 1926, did not observe it until June 28 and recorded no more than 2 in any one day.

Flotten Lake Region. Common summer resident, particularly about brushy clearings, hence commoner south of Dorintosh than at Flotten Lake; breeds. Noted in 1948 on June 19(10), 23(15), 24(6), 27(5), 28(1), 29(11), 30(18), 31(2); August 2(1), 3(3), 4(4), 5(12), 6(estimated 50 in broad raspberry tangle at old clearing at Flotten Lake), 7(15), 9(20), 10(4), 11(10), 12(5), 13(5), 26(2), 31(2); September 1(1), 6(1). Allen (MS.) noted it as nesting at Flotten Lake in spring and early summer, 1947.

Specimens, National Museum of Canada:

Cypress Lake: 2 ad. ♂, 1 ad. ♀; June 2, 1921

Cypress Hills (near Maple Creek): 1 ad. ♀; July 7, 1926

Cypress Hills: 6 ad. ♂, 3 ad. ♀, 1 juv. ♂; June 23 to July 7, 1948

Maple Creek: 2 ad. ♂, 1 ad. ♀; June 8 to July 5, 1948

Flotten Lake: 2 ad. ♂, 2 ad. ♀, 5 juv.; July 30 to Aug. 9, 1948

The apparently heavier streaking of the Flotten Lake specimens is almost certainly due to their being more worn than are those from the Cypress Hills.

McCown Longspur. *Rhynchophanes mccownii* (Lawrence)

Cypress Hills Region. This species is abundant and breeding on the plains surrounding Cypress Hills, although somewhat local. In the higher parts of the Cypress Hills it was observed only once, an adult male on a broad treeless area with cover mostly shrubby cinquefoil, on June 30. It was collected.

Macoun (1904) recorded it as common and breeding at Crane Lake in June 1894, and common also in 1895 on Frenchman River up to Cypress Hills, but not in the hills. Bent (1908) noted it as very common in 1906 north of Maple Creek, finding 2 nests on June 13. Taverner took a specimen at Golden Prairie on August 9, 1920, and in 1921 found it abundant on the south side of Cypress Lake, but did not see it on the north side of that lake and noted very few at Eastend.

Specimens, National Museum of Canada:

- Crane Lake: 2 ad. ♂; April 25, 1894
- Cypress Lake: 5 ad. ♂, 2 ad. ♀; May 20 to 28, 1921
- Maple Creek: 1 ad. ♂; June 9, 1921
- Robsart (5 miles west): 8 ad. ♂, 1 ad. ♀; June 17, 1948
- Cypress Hills: 1 ad. ♂; June 30, 1948
- Golden Prairie: 1 post-juv. ♂; Aug. 9, 1920

Alaska Longspur. *Calcarius lapponicus alascensis* Ridgway

Cypress Hills Region. Potter (1925) refers to the wintering of this species, the subspecies of which may be either this or *lapponicus*, or both.

Flotten Lake Region. In 1948, this species was first noted on September 2 when 24 were noted at Flotten Lake. It was seen also on September 3(2), 4(10), 5(6), 6(5).

Specimens, National Museum of Canada:

- Flotten Lake: 2♂, 2 ♀; Sept. 2 to 4, 1948

Although the Flotten Lake specimens listed above show almost no tendency toward *lapponicus*, nevertheless *lapponicus* appears to be the commoner migrant, in eastern Saskatchewan at least. The National Museum has 15 autumn (September and October) specimens from Regina and Indian Head. Three of these from Indian Head and 2 from Regina (September 11 to 29), though by no means typical, are closer to *alascensis*. The other 10 (September 8 to October 5), 6 from Indian Head and 4 from Regina, are referred to *lapponicus*. Todd (1947) referred 7 specimens from Last Mountain Lake and Davidson (12 miles west), to *lapponicus*.

Chestnut-collared Longspur. *Calcarius ornatus* (Townsend)

Cypress Hills Region. Abundant on the plains surrounding the Cypress Hills, but not noted in the higher hills; breeds.

Macoun (1904) said that Spreadborough found it breeding in large numbers at Crane Lake in June 1894, and 3 nests with young and one with 4 fresh eggs were seen on June 12. Nests with eggs were collected there on June 8 and 9. Bent (1908), too, recorded it as very common on the prairies. Taverner in 1920 found it "common practically everywhere in the open prairie country" and took a specimen at Bitter Lake on August 9. In 1921 he noted it as being very common on the prairie south of Cypress Lake, but did not see it on the north side and found it almost absent from Eastend.

While driving between Swift Current and North Battleford on July 16, our northernmost observation of this species was just south of Biggar where an adult male was observed.

Specimens, National Museum of Canada:

Bitter Lake: 1 juv.; Aug. 9, 1920

Cypress Lake: 4 ad. ♂, 1 ad. ♀; May 18 to 28, 1921

Crane Lake: 1 ad. ♂; June 11, 1894

Robsart (5 miles west): 5 ad. ♂, 2 ad. ♀; June 17, 1948

Eastern Snow Bunting. *Plectrophenax nivalis nivalis* (Linnaeus)

Cypress Hills Region. Migrant and winter visitor. Potter (1925) mentions the occurrence of this species in December in the Eastend area, and in several Christmas censuses.

Flotten Lake Region. C. F. Shirley informed the writer that this species frequently visits the straw stacks during winter at his home near Dorintosh.

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